

The Sharpless Observing Atlas

Reiner Vogel, Dezember 2009

<http://www.deepsky.de.tc/>



Original data are from **Stewart Sharpless** (1959) A catalogue of HII regions.

Astrophys J Suppl. 4: 257

http://adsabs.harvard.edu/cgi-bin/nph-bib_query?bibcode=1959ApJS....4..257S

Data, descriptions, and POSS composite images (IR/red/blue) are from **Kevin Jardine** and his website
<http://galaxymap.org>



Many Narrowband (mostly SII/HII/OIII) and H-alpha RGB images are from **Dean Salman's** excellent collection of Sharpless images at
<http://www.sharplesscatalog.com>

2000 coordinates are from **Steve Gottlieb** <http://www.astronomy-mall.com/Adventures.In.Deep.Space/>

DSS finder images have all the same scale of 60'x60' and are derived mostly from POSS II red plates

Small images are from mostly POSS II blue and red plates

All images and charts are oriented with **north to the top**

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Finder charts are 20° (with 6° circle) and 5° and were prepared with Cartes du Ciel by Patrick Chevalley

<http://www.ap-i.net/skychart/>

The Sharpless Catalog

Coordinates 2000

Name	Other names	RA	Dec	Diameter	Form	Structure	Brightness
Sh 2-001		15 58 50.8	-26 07 14	150	3	2	3
Sh 2-002		17 04 06.5	-38 08 33	60	3	2	2
Sh 2-003		17 13 44.7	-38 30 11	12	2	3	3
Sh 2-004		17 19 48.5	-39 20 19	5	2	3	3
Sh 2-005		17 20 02.9	-38 27 17	100	3	2	2
Sh 2-006	Bug nebula	17 15 03.2	-37 06 60	4	3	2	3
Sh 2-007		16 00 19.1	-22 57 03	240	3	2	1
Sh 2-008	NGC6334, Cat's paw	17 21 24.5	-36 02 05	120	3	3	3
Sh 2-009		16 21 10.6	-25 35 22	80	3	2	2
Sh 2-010		17 18 59.1	-34 05 26	60	3	2	2
Sh 2-011	NGC6357:	17 26 30.6	-34 12 20	90	3	3	3
Sh 2-012	Contains NGC6383	17 35 55.2	-32 35 58	120	1	2	2
Sh 2-013		17 30 28.4	-31 33 46	40	2	2	2
Sh 2-014		17 30 18.3	-30 15 46	2	3	1	2
Sh 2-015		17 50 34.2	-31 15 50	30	2	2	2
Sh 2-016		17 47 52.1	-29 18 14	20	3	2	2
Sh 2-017		17 46 08.4	-28 51 28	25	3	2	2
Sh 2-018		17 48 45.1	-29 15 06	4	1	2	2
Sh 2-019		17 49 20.9	-29 07 01	12	1	1	2
Sh 2-020		17 49 14.2	-28 40 02	10	3	2	2
Sh 2-021		17 51 38.6	-28 53 40	5	3	2	2
Sh 2-022		17 55 02.9	-25 02 10	60	3	2	2
Sh 2-023		16 13 24.4	-08 22 20	50	3	2	1
Sh 2-024		16 11 03.0	-07 04 38	30	2	1	2
Sh 2-025	M8 = Lagoon	18 05 25.0	-24 23 39	90	3	3	3
Sh 2-026		17 58 58.5	-23 19 35	20	3	2	1
Sh 2-027		16 37 12.3	-10 34 11	480	3	2	2
Sh 2-028		18 02 40.9	-23 35 03	40	1	2	1
Sh 2-029		18 10 30.5	-23 59 55	40	3	2	2
Sh 2-030	M20 = Trifid	18 03 34.1	-23 00 55	20	3	3	3
Sh 2-031	IC 1275	18 11 18.2	-23 47 48	8	1	1	2
Sh 2-032	IC 1274	18 10 53.0	-23 38 51	8	1	2	2
Sh 2-033		15 59 52.3	-01 37 03	35	3	2	1
Sh 2-034		18 06 24.3	-21 39 31	90	3	2	2
Sh 2-035		18 15 50.3	-20 15 07	20	3	1	2
Sh 2-036		16 05 30.3	+00 23 40	45	1	2	1
Sh 2-037	IC 1283/1284	18 17 42.6	-19 39 51	20	3	2	2
Sh 2-038		18 08 44.8	-18 16 09	3	3	2	1
Sh 2-039		18 16 46.2	-18 38 59	3	3	1	2
Sh 2-040		18 12 02.1	-17 44 41	15	3	2	2
Sh 2-041		18 15 50.7	-18 14 07	90	3	2	2
Sh 2-042		18 10 16.9	-16 48 55	3	3	1	2

Sh 2-043		18 16 24.6	-17 24 02	15	2	1	2
Sh 2-044	IC 4701	18 16 28.8	-16 44 01	60	3	2	2
Sh 2-045	M17 = NGC6618 = Swan Nebula	18 20 46.0	-16 10 24	60	3	3	3
Sh 2-046		18 06 10.6	-14 09 31	25	2	2	2
Sh 2-047		18 17 44.4	-15 36 50	5	1	2	2
Sh 2-048		18 22 24.1	-14 35 09	10	3	2	2
Sh 2-049	M16 = NGC6611 = Eagle Nebula	18 18 40.3	-13 57 42	90	3	3	3
Sh 2-050		18 25 30.2	-14 42 42	35	3	2	2
Sh 2-051		18 40 46.3	-16 33 30	35	3	1	1
Sh 2-052	PN Abell 65	19 47 46.3	-23 05 15	2	2	1	2
Sh 2-053		18 25 14.4	-13 13 44	15	3	2	2
Sh 2-054	Contains NGC6604	18 17 52.6	-11 43 48	140	3	3	3
Sh 2-055		18 32 10.5	-11 45 44	5	3	2	1
Sh 2-056		18 31 06.1	-09 42 52	7	1	2	1
Sh 2-057		18 30 32.8	-08 36 58	2	3	2	1
Sh 2-058		18 31 26.6	-08 27 50	8	3	2	2
Sh 2-059		18 37 00.6	-07 36 01	20	3	2	1
Sh 2-060		18 36 40.5	-06 42 04	20	3	2	2
Sh 2-061		18 32 54.5	-05 00 36	2	3	2	3
Sh 2-062		18 27 34.2	-03 51 22	4	3	1	1
Sh 2-063		19 57 42.5	-14 06 57	55	3	2	1
Sh 2-064		18 31 35.0	-01 54 47	25	3	2	2
Sh 2-065		18 46 58.0	-03 44 35	7	3	2	2
Sh 2-066		18 45 30.0	-01 59 47	8	3	2	2
Sh 2-067		18 49 24.4	-02 21 13	10	2	1	1
Sh 2-068	PN	18 25 10.8	+00 51 17	8	3	2	2
Sh 2-069		18 44 26.1	-00 16 55	20	2	2	2
Sh 2-070		18 14 38.5	+07 03 47	5	3	1	2
Sh 2-071	PN	19 02 02.3	+02 09 35	3	2	2	3
Sh 2-072		19 03 50.2	+02 18 50	25	3	2	2
Sh 2-073		16 11 06.9	+21 52 26	75	3	2	1
Sh 2-074		19 08 48.5	+05 36 32	3	3	2	2
Sh 2-075		18 59 14.7	+07 07 12	10	1	2	1
Sh 2-076		18 56 24.9	+07 48 48	7	1	2	1
Sh 2-077		19 48 16.6	+01 08 52	8	2	1	1
Sh 2-078	CTSS 3, PN	19 03 10.6	+14 07 46	12	1	1	1
Sh 2-079		19 23 18.2	+13 58 34	40	3	2	1
Sh 2-080	M1-67, WR shell	19 11 28.5	+16 51 57	2	3	2	3
Sh 2-081		20 01 12.7	+11 47 33	10	3	1	1
Sh 2-082		19 30 20.4	+18 16 31	9	3	1	2
Sh 2-083		19 24 32.1	+20 47 45	2	1	2	2
Sh 2-084		19 49 04.0	+18 24 01	15	3	2	3
Sh 2-085		19 03 16.6	+25 49 49	6	3	2	2
Sh 2-086	NGC6820	19 43 08.8	+23 17 15	40	1	2	2
Sh 2-087		19 46 24.4	+24 37 41	10	3	1	1
Sh 2-088		19 45 58.4	+25 20 38	25	3	2	2
Sh 2-089		19 50 02.2	+26 29 10	5	1	2	1
Sh 2-090		19 49 12.7	+26 52 04	6	3	2	2
Sh 2-091	part of SNR	19 35 34.0	+29 36 16	120	3	3	2
Sh 2-092		19 46 38.7	+28 14 44	50	1	1	1

Sh 2-093		19 55 00.6	+27 12 48	1	3	2	3
Sh 2-094	part of SNR	19 27 50.8	+31 28 14	25	3	3	1
Sh 2-095	NGC6842, PN	19 55 00.9	+29 17 49	1	1	2	2
Sh 2-096	part of SNR	19 28 42.0	+32 41 21	25	3	2	1
Sh 2-097		19 56 04.6	+30 15 57	10	1	2	1
Sh 2-098		19 58 44.3	+31 25 18	15	1	1	1
Sh 2-099		20 00 50.5	+33 29 34	5	3	2	3
Sh 2-100	NGC6857	20 01 50.6	+33 30 41	4	3	2	3
Sh 2-101		19 59 56.8	+35 17 27	20	3	2	2
Sh 2-102		20 31 46.6	+30 36 19	40	3	1	1
Sh 2-103	Veil Nebula	20 50 32.3	+30 55 25	210	3	3	3
Sh 2-104		20 17 44.6	+36 44 40	7	1	2	2
Sh 2-105	NGC<6888 = Crescent Nebula	20 12 02.4	+38 20 59	18	2	3	3
Sh 2-106		20 27 26.9	+37 23 49	3	3	2	3
Sh 2-107		20 42 46.4	+36 20 34	5	2	2	2
Sh 2-108	IC 1318	20 22 34.8	+40 15 15	180	3	3	3
Sh 2-109		20 33 38.3	+40 20 33	1080	2	3	2
Sh 2-110		21 20 48.5	+32 27 28	50	3	2	1
Sh 2-111	Veil Nebula	21 41 52.7	+30 06 20	90	3	1	1
Sh 2-112		20 33 50.2	+45 39 35	15	1	2	2
Sh 2-113		21 20 48.2	+38 05 29	15	3	1	1
Sh 2-114		21 21 10.5	+38 42 31	9	3	3	2
Sh 2-115		20 34 33.0	+46 52 40	50	3	2	2
Sh 2-116	Abell 71	20 32 18.6	+47 21 25	2	1	2	2
Sh 2-117	NGC7000 North American N.	20 58 46.3	+44 19 19	240	3	3	2
Sh 2-118		21 37 00.7	+40 12 57	480	3	2	1
Sh 2-119		21 18 25.0	+43 56 16	160	2	2	3
Sh 2-120		21 03 46.6	+49 52 51	1	1	1	1
Sh 2-121		21 05 12.4	+49 38 59	1	3	2	1
Sh 2-122		23 08 46.7	+14 55 30	40	3	2	1
Sh 2-123		21 42 22.5	+44 32 25	13	2	2	2
Sh 2-124		21 38 20.9	+50 21 05	70	1	2	2
Sh 2-125	IC 5146 = Cocoon Nebula	21 53 32.7	+47 16 18	9	2	2	3
Sh 2-126		22 33 26.9	+38 34 56	160	3	2	2
Sh 2-127		21 28 41.0	+54 37 14	2	3	2	2
Sh 2-128		21 32 08.4	+55 51 34	1	3	2	3
Sh 2-129		21 11 44.4	+59 57 40	140	3	2	2
Sh 2-130		20 42 59.6	+63 13 43	3	3	2	2
Sh 2-131	IC 1396	21 39 00.2	+57 29 10	170	1	2	2
Sh 2-132		22 18 47.0	+56 08 05	90	3	3	2
Sh 2-133		21 28 59.8	+64 18 19	80	3	1	1
Sh 2-134		22 11 29.1	+59 24 37	160	3	2	2
Sh 2-135		22 22 11.0	+58 44 18	15	3	2	2
Sh 2-136		21 16 29.5	+68 15 12	5	3	2	3
Sh 2-137		21 57 06.6	+64 41 37	90	3	2	1
Sh 2-138		22 32 39.0	+58 28 55	1	3	2	2
Sh 2-139		22 34 59.4	+58 13 02	10	3	2	1
Sh 2-140		22 19 07.0	+63 17 07	30	2	2	3
Sh 2-141		22 28 30.4	+61 38 41	5	1	1	2
Sh 2-142	Contains NGC7380	22 47 35.1	+58 03 39	30	3	3	3

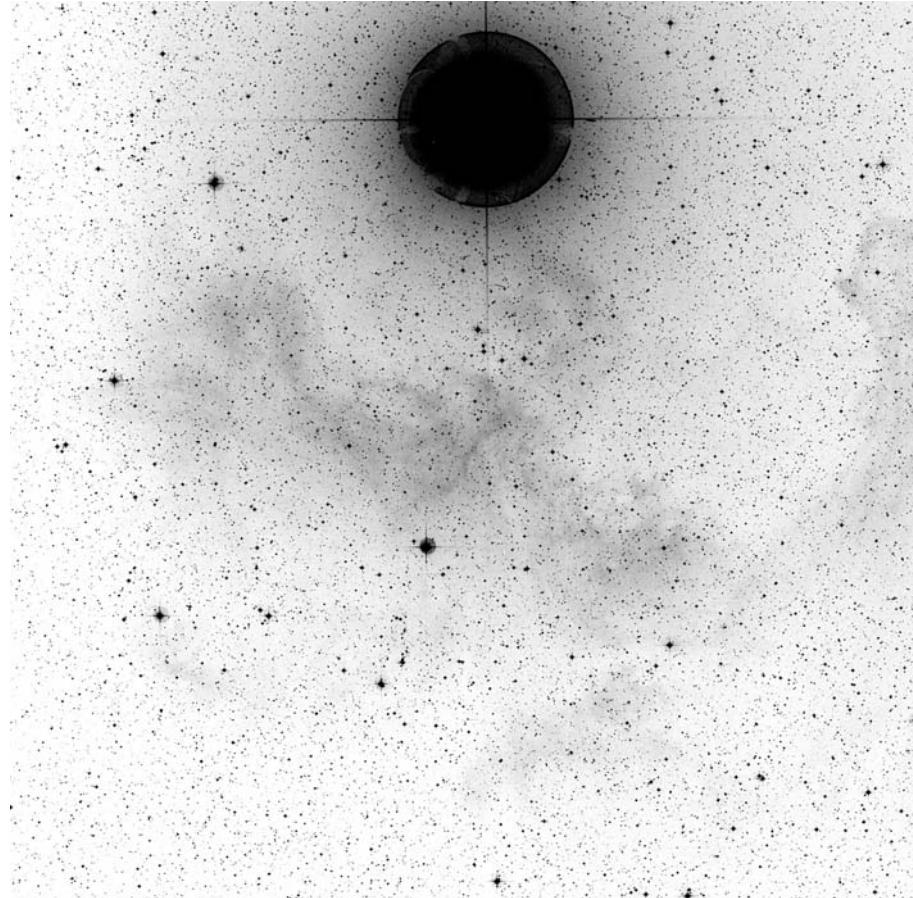
Sh 2-143		22 50 14.8	+57 42 47	4	3	1	1
Sh 2-144		22 44 51.4	+59 53 32	4	3	2	1
Sh 2-145		22 25 33.0	+64 18 31	90	2	2	1
Sh 2-146		22 49 25.5	+59 55 45	2	3	2	2
Sh 2-147		22 55 29.2	+58 28 01	2	1	1	1
Sh 2-148		22 56 11.4	+58 31 02	2	3	2	3
Sh 2-149		22 56 23.5	+58 32 03	1	1	1	2
Sh 2-150		22 31 11.1	+65 06 51	40	3	2	2
Sh 2-151		23 03 03.0	+57 04 18	20	3	1	1
Sh 2-152		22 58 37.2	+58 47 08	2	3	2	3
Sh 2-153		22 59 13.6	+58 44 10	5	1	2	2
Sh 2-154		22 51 24.6	+61 10 50	60	3	2	2
Sh 2-155		22 56 43.2	+62 37 04	60	3	2	2
Sh 2-156	IC 1470	23 05 09.6	+60 15 23	2	1	2	3
Sh 2-157		23 16 03.2	+60 02 44	90	3	3	3
Sh 2-158	NGC7538	23 13 39.6	+61 30 40	10	2	3	3
Sh 2-159		23 15 43.0	+61 08 44	7	3	2	2
Sh 2-160		23 05 47.2	+64 40 24	80	3	2	1
Sh 2-161		23 15 29.2	+61 51 43	55	2	2	2
Sh 2-162	NGC7635 = Bubble Nebula	23 20 41.5	+61 11 52	40	3	3	3
Sh 2-163		23 33 19.3	+60 47 09	10	3	2	2
Sh 2-164		23 38 25.3	+59 58 13	3	3	2	2
Sh 2-165		23 39 48.1	+61 56 15	10	2	2	2
Sh 2-166		23 42 09.8	+60 58 17	10	1	1	1
Sh 2-167		23 35 21.8	+64 51 11	2	1	1	1
Sh 2-168		23 53 03.5	+60 28 23	7	2	2	2
Sh 2-169		23 53 58.0	+60 22 23	5	1	1	1
Sh 2-170		00 01 42.0	+64 37 24	20	1	2	2
Sh 2-171	NGC7822 + Ced214	00 04 40.0	+67 09 24	180	3	2	3
Sh 2-172		00 15 32.2	+61 15 21	1	2	1	1
Sh 2-173		00 21 51.8	+61 44 17	30	1	2	2
Sh 2-174		23 46 49.1	+80 56 20	10	3	2	1
Sh 2-175		00 27 18.6	+64 42 13	2	1	2	2
Sh 2-176		00 31 38.3	+57 17 09	10	3	2	1
Sh 2-177		00 31 32.4	+62 28 09	40	3	1	1
Sh 2-178		22 18 55.4	+87 45 41	420	3	2	1
Sh 2-179	BV 5-2	00 40 24.6	+62 51 58	1	1	1	1
Sh 2-180		00 48 46.3	+62 55 45	15	3	1	1
Sh 2-181		00 49 16.5	+65 12 44	15	3	1	1
Sh 2-182		00 50 16.4	+64 44 42	2	3	1	1
Sh 2-183		00 53 59.1	+65 42 35	35	3	2	1
Sh 2-184	NGC281	00 52 50.1	+56 36 37	40	3	2	3
Sh 2-185	IC 59/63	00 60 00.0	+60 59 23	120	3	2	2
Sh 2-186		01 08 50.7	+63 08 02	1	3	2	2
Sh 2-187		01 23 07.0	+61 51 24	10	3	3	2
Sh 2-188	Simeis 22	01 30 38.6	+58 22 01	9	3	3	2
Sh 2-189	Abell 3	02 12 07.6	+64 10 18	2	1	1	1
Sh 2-190	IC 1805	02 33 22.7	+61 26 32	150	3	3	3
Sh 2-191	Maffei I	02 36 38.7	+59 38 14	2	3	1	3
Sh 2-192		02 47 13.3	+61 59 17	1	2	1	1

Sh 2-193		02 47 32.5	+62 00 15	2	2	1	1
Sh 2-194		02 47 19.1	+61 56 17	2	2	1	2
Sh 2-195		02 40 05.1	+59 38 56	3	3	1	1
Sh 2-196		02 51 18.8	+62 13 53	4	1	1	2
Sh 2-197	Maffei II	02 41 54.8	+59 38 46	5	3	2	1
Sh 2-198		02 50 01.0	+59 42 01	9	2	2	2
Sh 2-199	IC 1848	02 54 32.9	+60 24 34	120	3	2	3
Sh 2-200	PN HDW 2	03 10 44.7	+62 48 55	6	2	2	1
Sh 2-201		03 03 10.3	+60 28 42	5	3	2	3
Sh 2-202		03 18 50.8	+59 38 03	170	3	2	1
Sh 2-203		03 22 00.3	+54 52 40	45	1	2	1
Sh 2-204		03 55 45.6	+57 25 45	40	3	2	2
Sh 2-205		03 56 07.7	+53 11 40	120	3	2	2
Sh 2-206	NGC1491	04 03 13.1	+51 19 46	50	3	2	3
Sh 2-207		04 20 04.0	+53 08 37	4	1	2	2
Sh 2-208	PK 151+02.1	04 19 45.5	+52 58 39	1	1	2	3
Sh 2-209		04 11 03.0	+51 09 47	14	3	2	2
Sh 2-210		04 30 59.0	+52 33 10	20	3	1	2
Sh 2-211		04 36 57.3	+50 56 22	2	3	2	3
Sh 2-212	NGC1624	04 40 37.3	+50 22 52	5	1	2	3
Sh 2-213		04 20 42.9	+44 55 30	1	3	2	1
Sh 2-214		04 21 34.8	+44 22 22	4	1	1	1
Sh 2-215		04 17 32.8	+42 36 54	2	3	2	2
Sh 2-216	Simeiz 288	04 44 56.9	+46 49 15	80	3	2	2
Sh 2-217		04 58 47.1	+48 00 20	9	2	2	2
Sh 2-218		05 41 16.4	+52 11 18	70	2	1	1
Sh 2-219		04 56 07.3	+47 23 43	3	2	2	3
Sh 2-220	NGC1499	04 00 37.5	+36 37 02	320	3	2	3
Sh 2-221		05 01 39.3	+46 20 56	120	3	2	1
Sh 2-222	NGC1579	04 30 09.2	+35 16 13	6	3	2	3
Sh 2-223		05 17 11.1	+42 12 43	70	3	2	2
Sh 2-224		05 27 15.2	+42 58 16	30	3	3	2
Sh 2-225		05 27 00.3	+40 37 17	10	3	2	2
Sh 2-226		05 11 06.6	+37 59 33	3	3	2	3
Sh 2-227		05 19 52.8	+38 57 19	20	3	2	2
Sh 2-228		05 13 34.7	+37 27 12	8	3	2	3
Sh 2-229	IC 405, Flaming Star N., LBN 795	05 16 18.6	+34 27 48	65	3	2	3
Sh 2-230		05 22 30.3	+34 07 55	300	3	2	2
Sh 2-231		05 39 18.9	+35 55 30	12	3	1	2
Sh 2-232		05 42 26.4	+36 12 03	40	2	2	2
Sh 2-233		05 38 42.6	+35 47 35	2	3	2	2
Sh 2-234	IC 417	05 28 07.0	+34 26 06	12	3	2	3
Sh 2-235		05 41 00.8	+35 51 15	10	3	2	3
Sh 2-236	IC 410	05 22 33.0	+33 21 54	55	3	2	3
Sh 2-237	NGC1931	05 31 24.8	+34 16 38	7	3	2	3
Sh 2-238	NGC1554/1555	04 21 49.2	+19 32 16	1	3	2	3
Sh 2-239		04 31 16.9	+18 07 00	5	3	2	2
Sh 2-240	Simeiz 147 SNR	05 41 00.2	+28 06 14	180	1	3	2
Sh 2-241		06 04 06.7	+30 14 52	10	3	2	3
Sh 2-242		05 51 50.7	+27 00 38	7	1	2	2

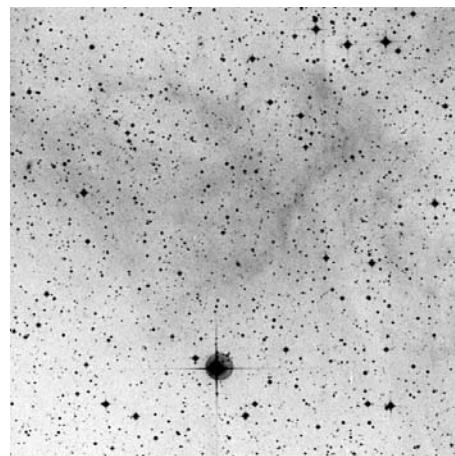
Sh 2-243		05 39 22.3	+23 17 27	6	3	2	1
Sh 2-244	M1 = NGC1952 = Crab Nebula	05 34 30.4	+21 57 09	5	2	3	3
Sh 2-245		04 02 32.8	+04 07 42	720	3	2	2
Sh 2-246		05 02 08.9	+14 05 44	65	3	1	1
Sh 2-247		06 08 30.2	+21 37 12	9	1	1	2
Sh 2-248	IC 443:	06 16 38.4	+22 30 01	50	2	3	3
Sh 2-249		06 20 58.1	+23 05 23	80	3	2	2
Sh 2-250	near NGC1633/1634	04 40 10.8	+07 21 47	10	3	2	1
Sh 2-251		04 32 49.0	+05 51 46	35	3	3	1
Sh 2-252	NGC2174/2175/IC 2159	06 09 38.7	+20 30 01	40	3	2	3
Sh 2-253		06 25 43.0	+20 01 41	5	3	1	1
Sh 2-254		06 12 20.5	+18 02 37	11	2	2	2
Sh 2-255		06 13 08.4	+17 58 31	3	1	2	3
Sh 2-256		06 12 38.3	+17 56 35	1	3	2	2
Sh 2-257	IC 2162	06 12 50.4	+17 58 33	3	1	2	3
Sh 2-258		06 13 32.3	+17 55 27	1	3	2	2
Sh 2-259		06 11 36.7	+17 26 44	2	1	1	1
Sh 2-260		04 55 07.0	+05 39 43	22	3	3	1
Sh 2-261		06 08 56.6	+15 48 07	45	3	2	2
Sh 2-262		05 06 44.7	+06 10 04	20	3	2	1
Sh 2-263		05 21 44.4	+08 23 56	22	2	2	2
Sh 2-264		05 35 12.3	+09 56 00	390	1	1	2
Sh 2-265		05 18 36.3	+07 26 23	70	3	2	2
Sh 2-266		06 18 48.9	+15 16 40	1	2	2	3
Sh 2-267	LBN 875 = PK 196-01.1	06 15 52.7	+14 16 06	4	1	1	2
Sh 2-268		06 10 14.6	+13 19 55	60	3	1	1
Sh 2-269		06 14 34.1	+13 49 18	4	3	2	3
Sh 2-270		06 10 12.9	+12 48 55	1	3	2	3
Sh 2-271	PK 197-02.1	06 14 54.3	+12 21 14	2	1	2	3
Sh 2-272		06 15 00.3	+12 20 14	1	2	1	2
Sh 2-273	NGC2264 = Christmas Tree	06 40 48.3	+09 54 28	250	3	2	3
Sh 2-274	Abell 21	07 29 06.4	+13 15 43	8	3	3	3
Sh 2-275	NGC2246 = Rosette Nebula	06 31 42.5	+04 55 47	100	1	2	3
Sh 2-276	Barnard's Loop	05 27 28.1	-03 57 55	1200	2	2	2
Sh 2-277	IC 434 or NGC2024?	05 40 42.9	-02 26 49	120	3	2	3
Sh 2-278		05 19 48.2	-05 39 49	50	3	2	2
Sh 2-279	NGC1973/1975/1977	05 35 20.1	-04 48 03	20	3	2	3
Sh 2-280		06 34 18.7	+02 32 23	40	3	2	2
Sh 2-281	M42/43 = Orion Nebula	05 34 54.4	-05 28 00	60	3	2	3
Sh 2-282		06 37 58.5	+01 30 51	35	3	2	2
Sh 2-283		06 38 38.6	+00 42 45	3	3	1	1
Sh 2-284		06 45 02.0	+00 13 51	80	2	2	2
Sh 2-285		06 55 12.2	-00 30 37	1	1	2	3
Sh 2-286		06 54 32.6	-04 30 32	6	2	1	1
Sh 2-287		06 59 32.3	-04 48 14	12	3	2	2
Sh 2-288	IC 466	07 08 33.0	-04 18 30	1	3	2	3
Sh 2-289		06 45 56.3	-07 20 18	11	2	1	1
Sh 2-290	Abell 31	08 54 10.5	+08 55 16	17	2	2	2
Sh 2-291		06 55 24.6	-08 01 40	8	2	1	2
Sh 2-292	vdB 93 = Gum 1	07 04 24.9	-10 26 56	21	3	2	3

Sh 2-293		07 01 46.9	-11 18 34	11	1	1	2
Sh 2-294		07 16 34.3	-09 26 38	7	3	2	3
Sh 2-295		07 02 40.7	-11 27 42	8	1	1	1
Sh 2-296	IC 2177 = Seagull Nebula	07 05 48.0	-11 13 08	200	3	2	3
Sh 2-297		07 05 14.7	-12 20 04	7	3	2	3
Sh 2-298	NGC2359 = Thor's Helmet	07 18 38.0	-13 11 55	22	3	3	3
Sh 2-299		07 30 38.9	-15 17 34	1	3	1	1
Sh 2-300		07 31 02.8	-15 24 37	3	2	1	1
Sh 2-301		07 09 48.4	-18 28 43	9	2	2	3
Sh 2-302		07 31 41.0	-16 58 43	21	2	1	2
Sh 2-303		06 54 00.9	-22 25 31	90	2	2	2
Sh 2-304		06 43 26.3	-24 07 59	200	3	2	2
Sh 2-305		07 30 08.1	-18 31 31	4	3	2	3
Sh 2-306		07 30 36.4	-19 06 35	30	3	2	1
Sh 2-307		07 35 32.0	-18 45 13	6	3	2	3
Sh 2-308		06 54 08.9	-23 56 31	35	3	3	2
Sh 2-309		07 32 06.1	-19 25 47	12	2	1	2
Sh 2-310		07 13 02.7	-24 35 11	480	3	2	2
Sh 2-311	NGC2467	07 52 20.4	-26 26 28	45	3	2	3
Sh 2-312		08 59 08.9	-25 41 19	720	3	2	2
Sh 2-313	Abell 35	12 53 31.0	-22 51 35	12	1	2	2

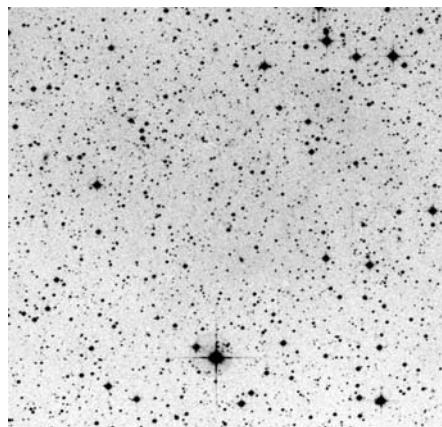
Sh 2 - 1
in Scorpius



60x60, blue



POSS blue



POSS red



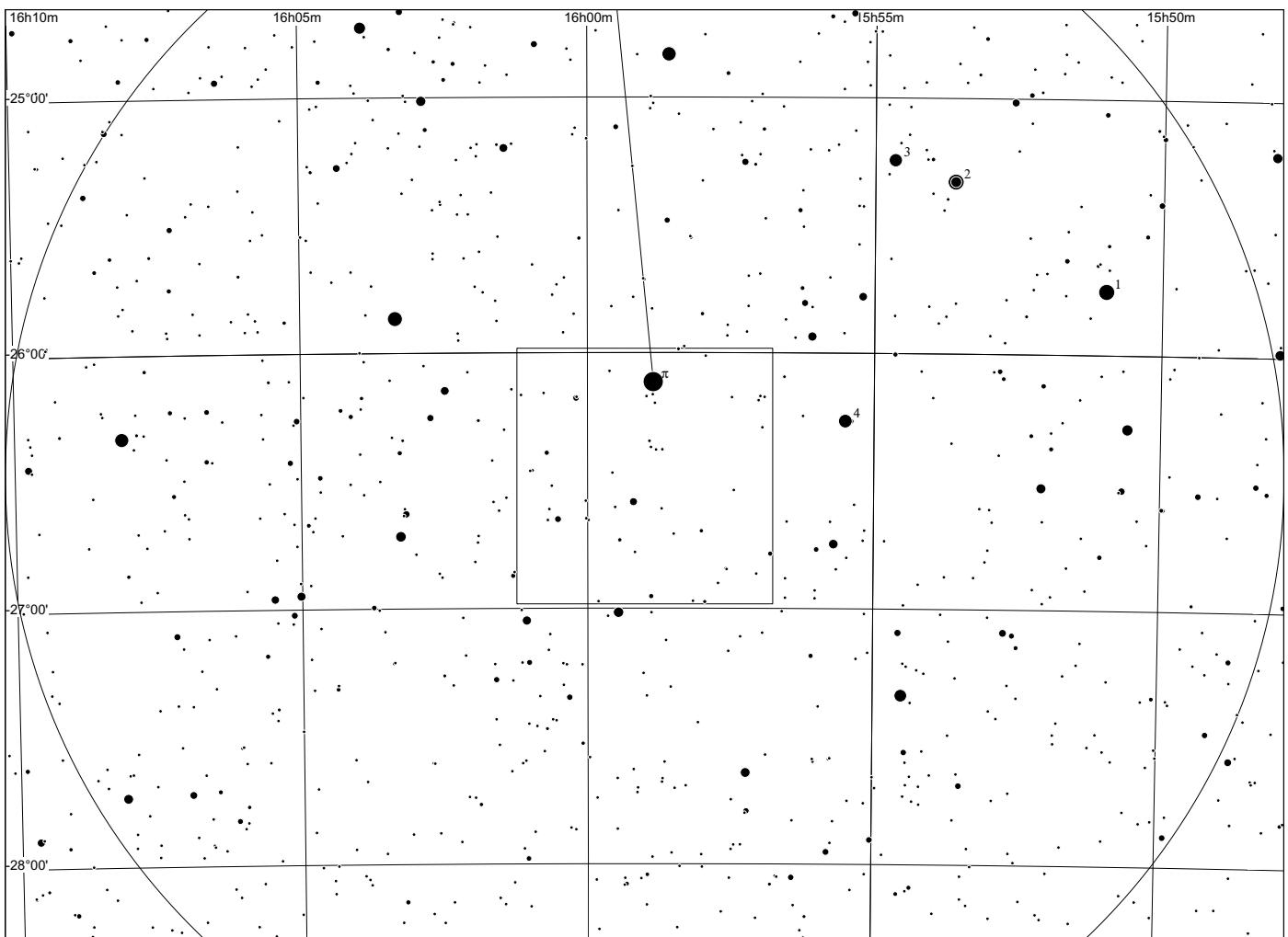
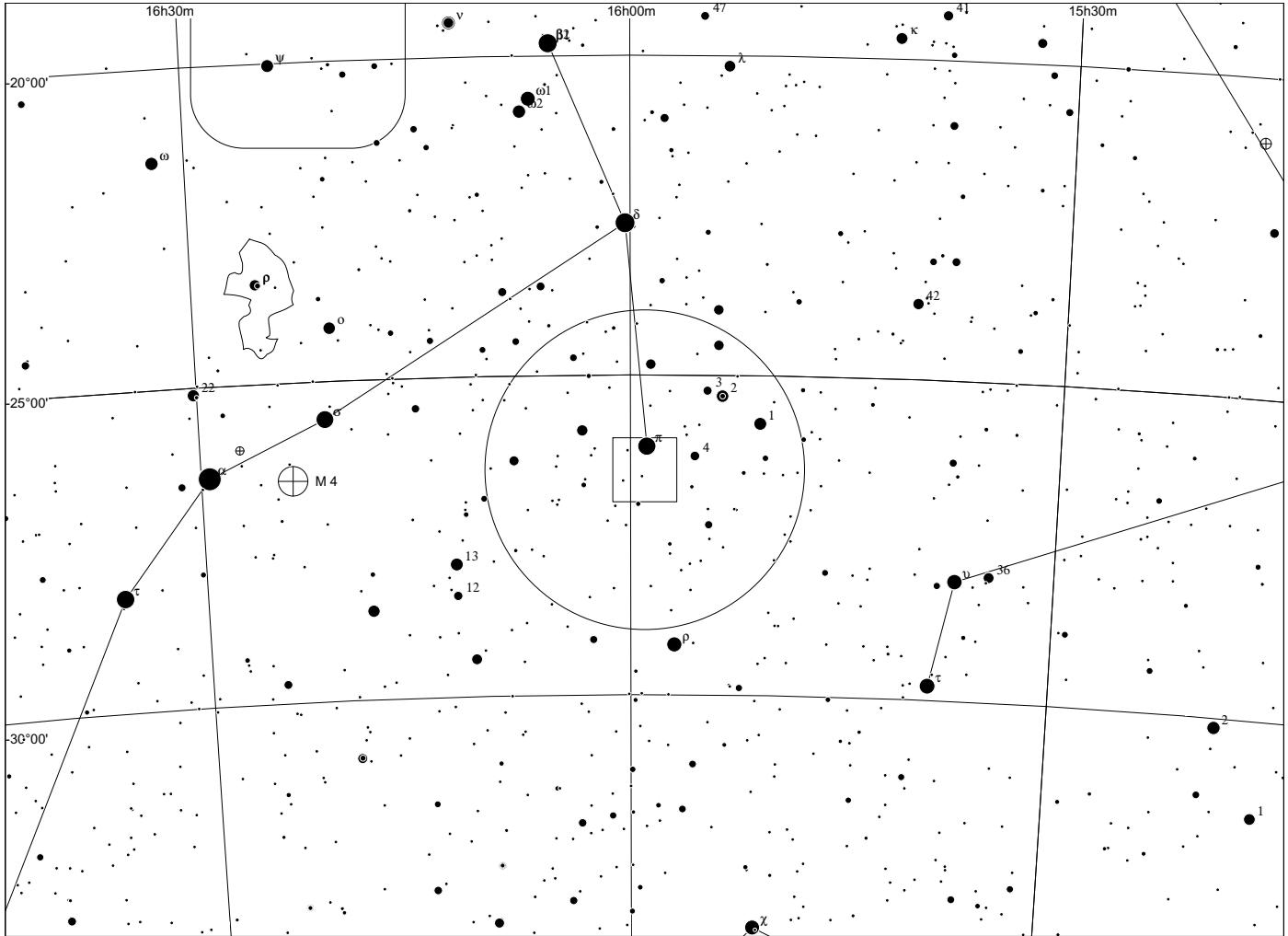
RGB Dean Salman

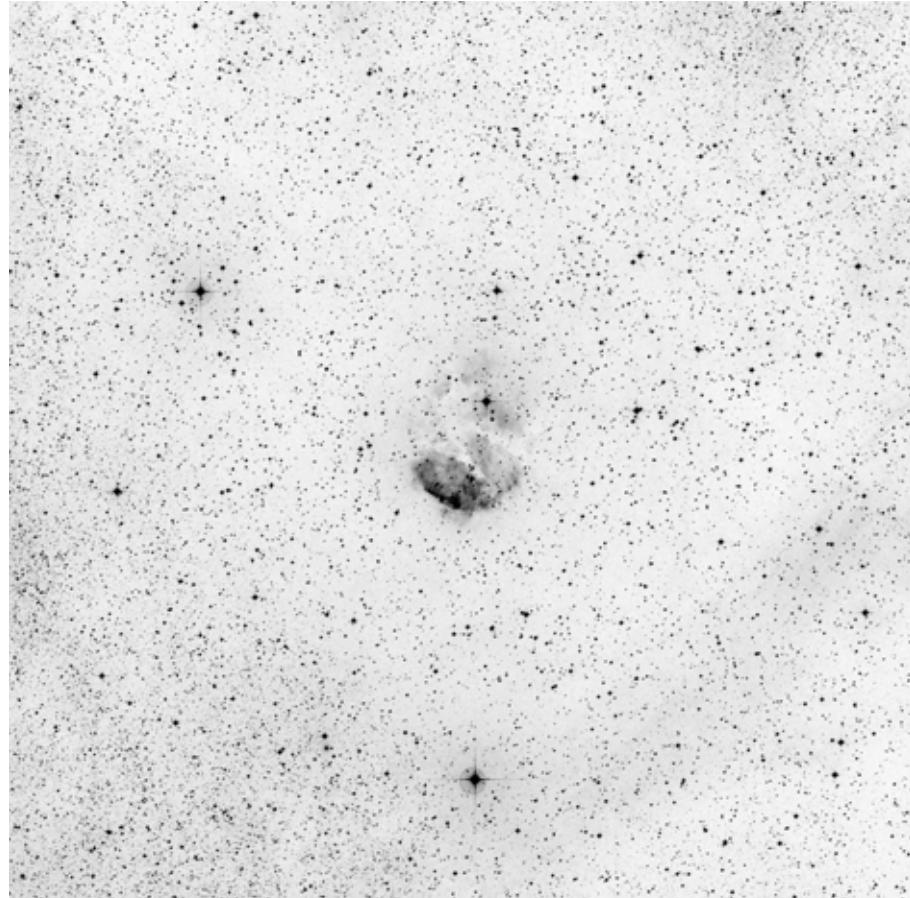
	other name	RA	dec	dia. '	F	S	B
Sh 2-001		15 58 50.8	-26 07 14	150	3	2	3

Distance: 200 pc, Size: 8.7 pc, Source: [2003A&A...397..133R](#)

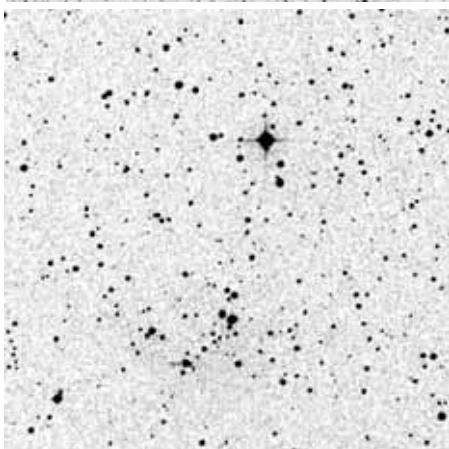
Associated with the star pi Scorpii in the nearby Upper Scorpius subgroup of the Scorpius OB2 association.

Observing notes:

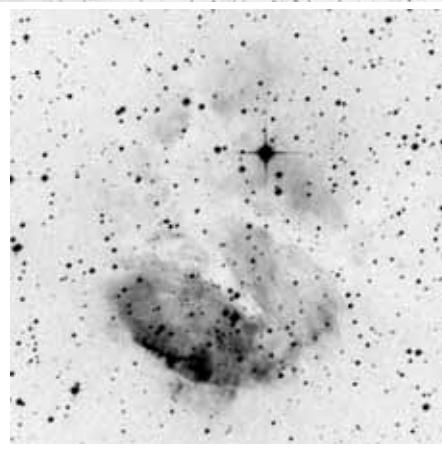


Sh 2 - 3**in Scorpius**

60x60, red



POSS blue



POSS red



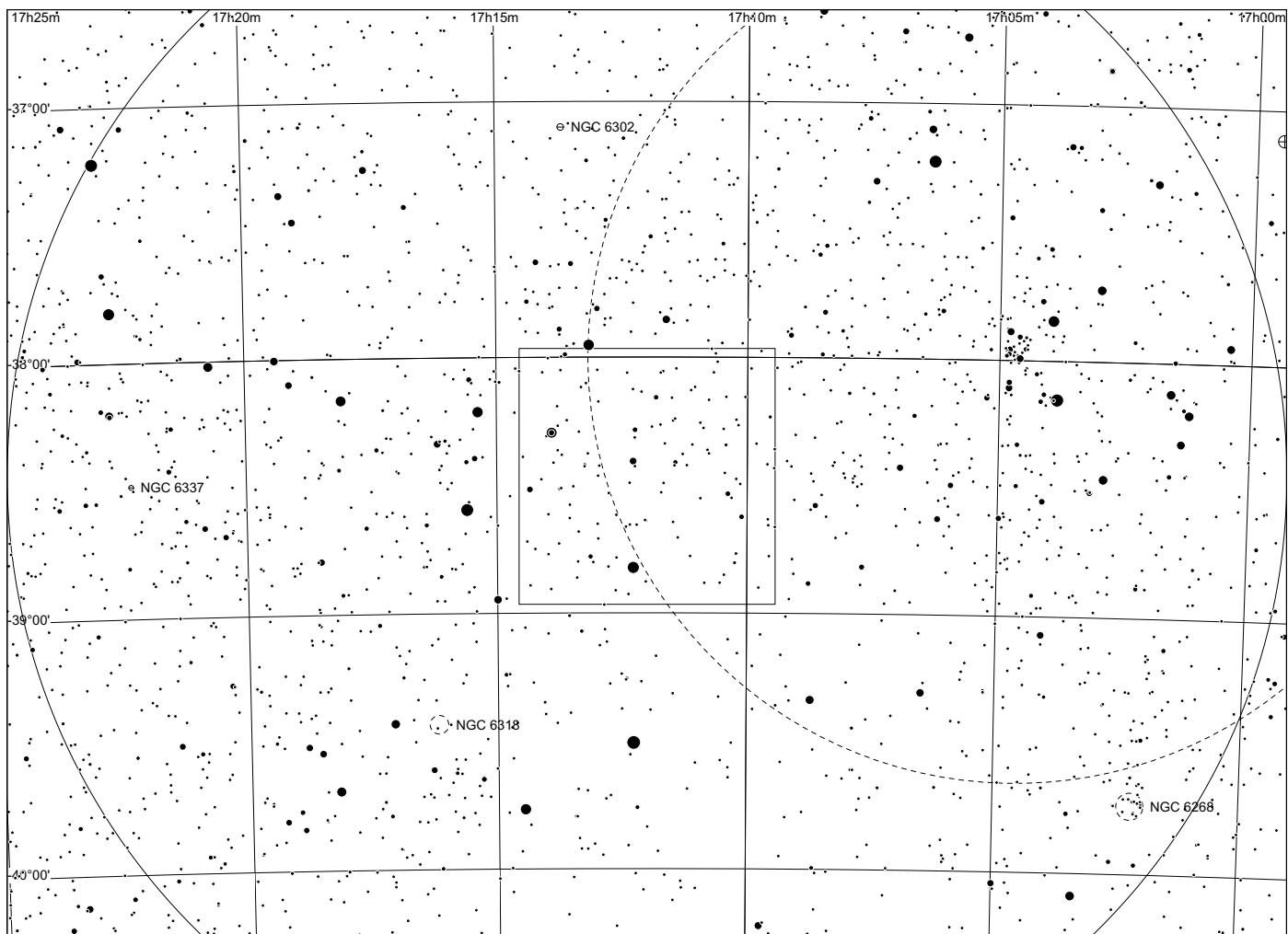
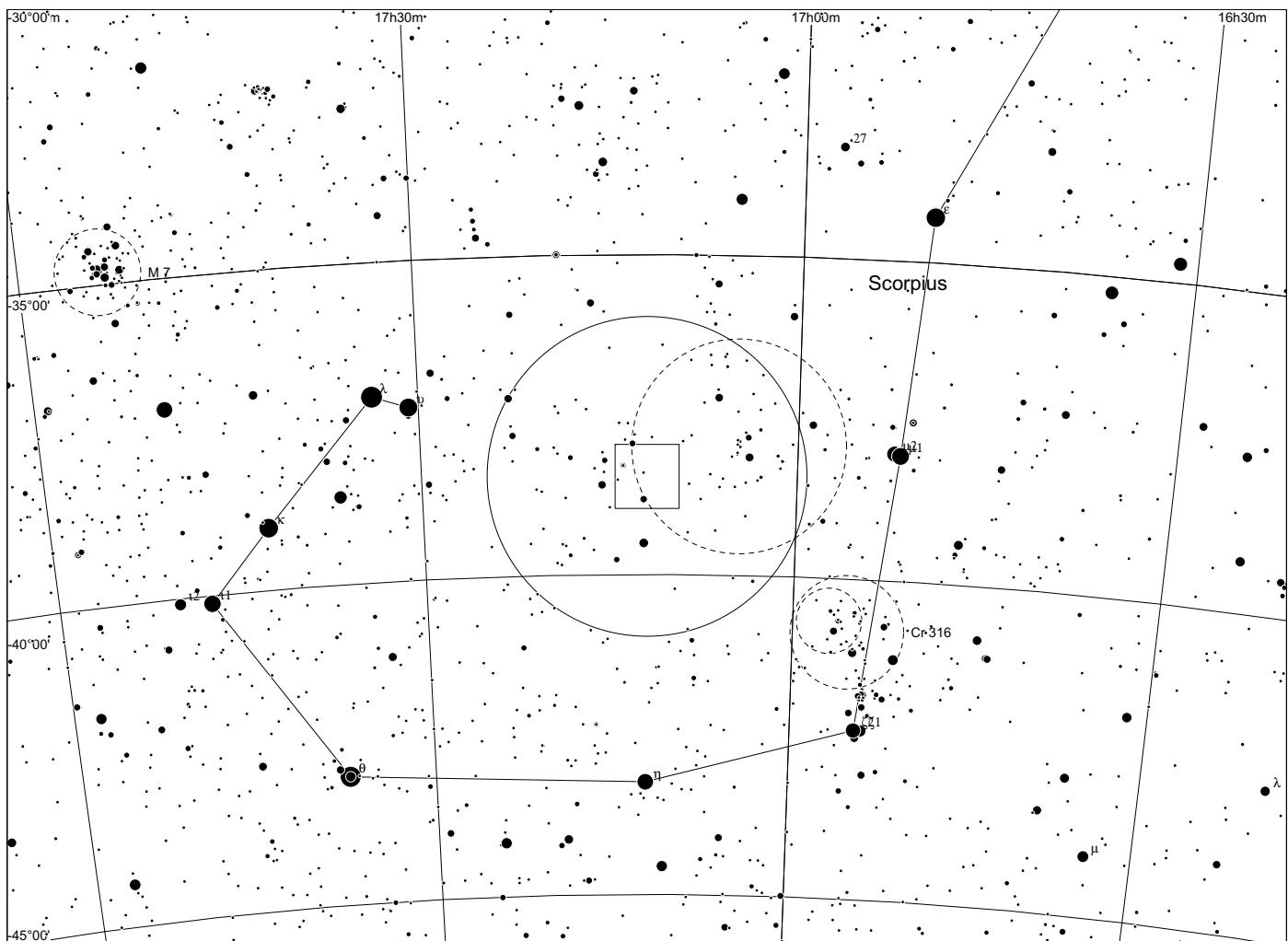
composite

	other name	RA	dec	dia. '	F	S	B
Sh 2-003		17 13 44.7	-38 30 11	12	2	3	3

Distance: 1300 pc, Size: 4.5 pc, Source: [2005A&A...433..565D](#)

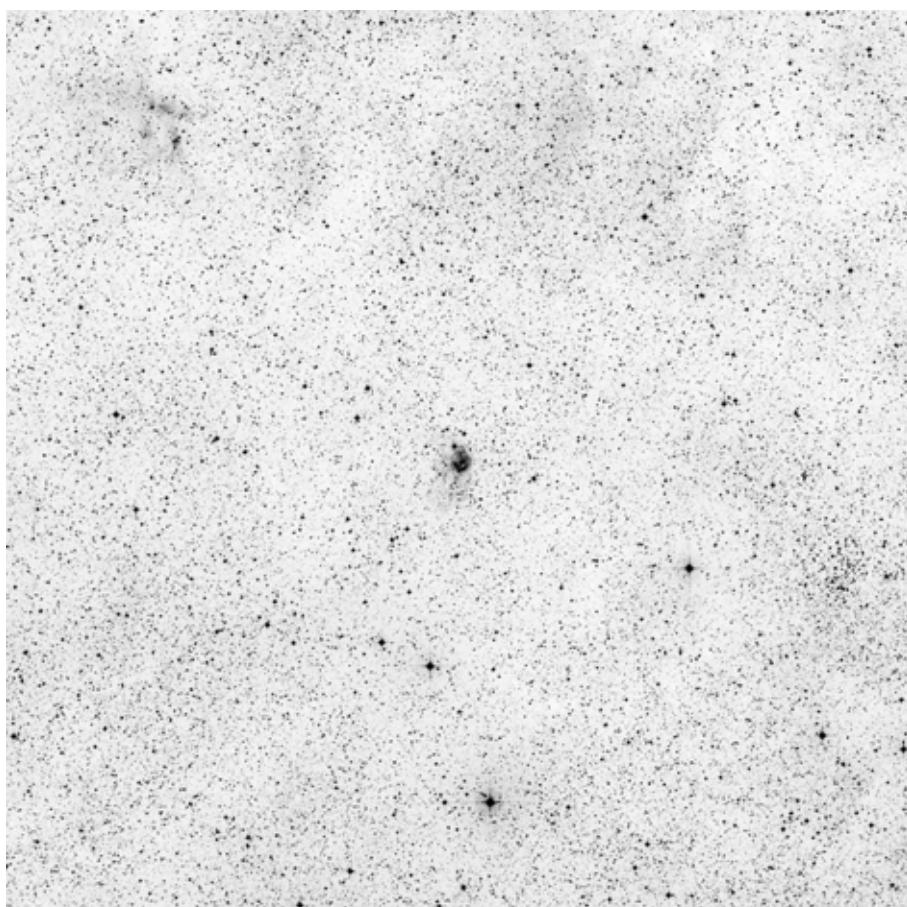
Gum 58 is ionised by an O6 V star, most likely CGO 439.

Observing notes:

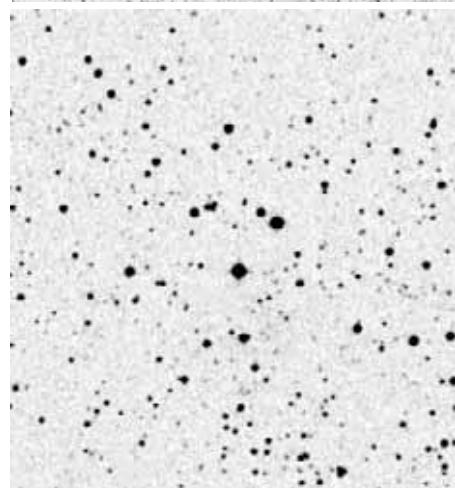


Sh 2 - 4

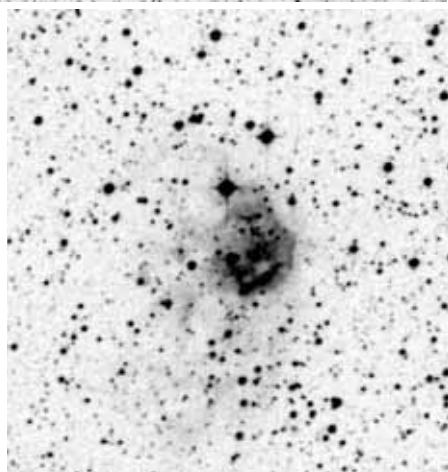
in Scorpius



60x60, red



POSS blue



POSS red



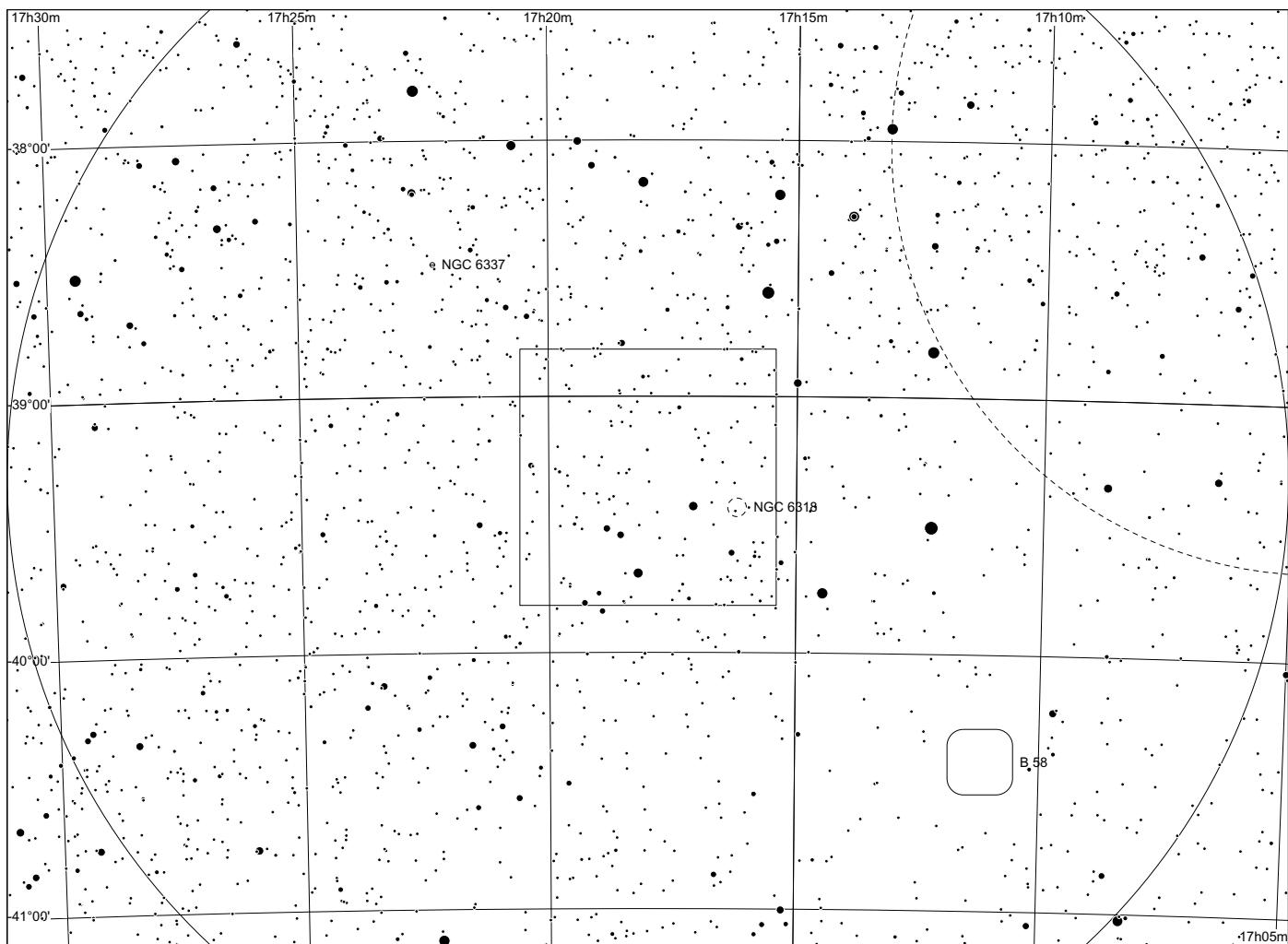
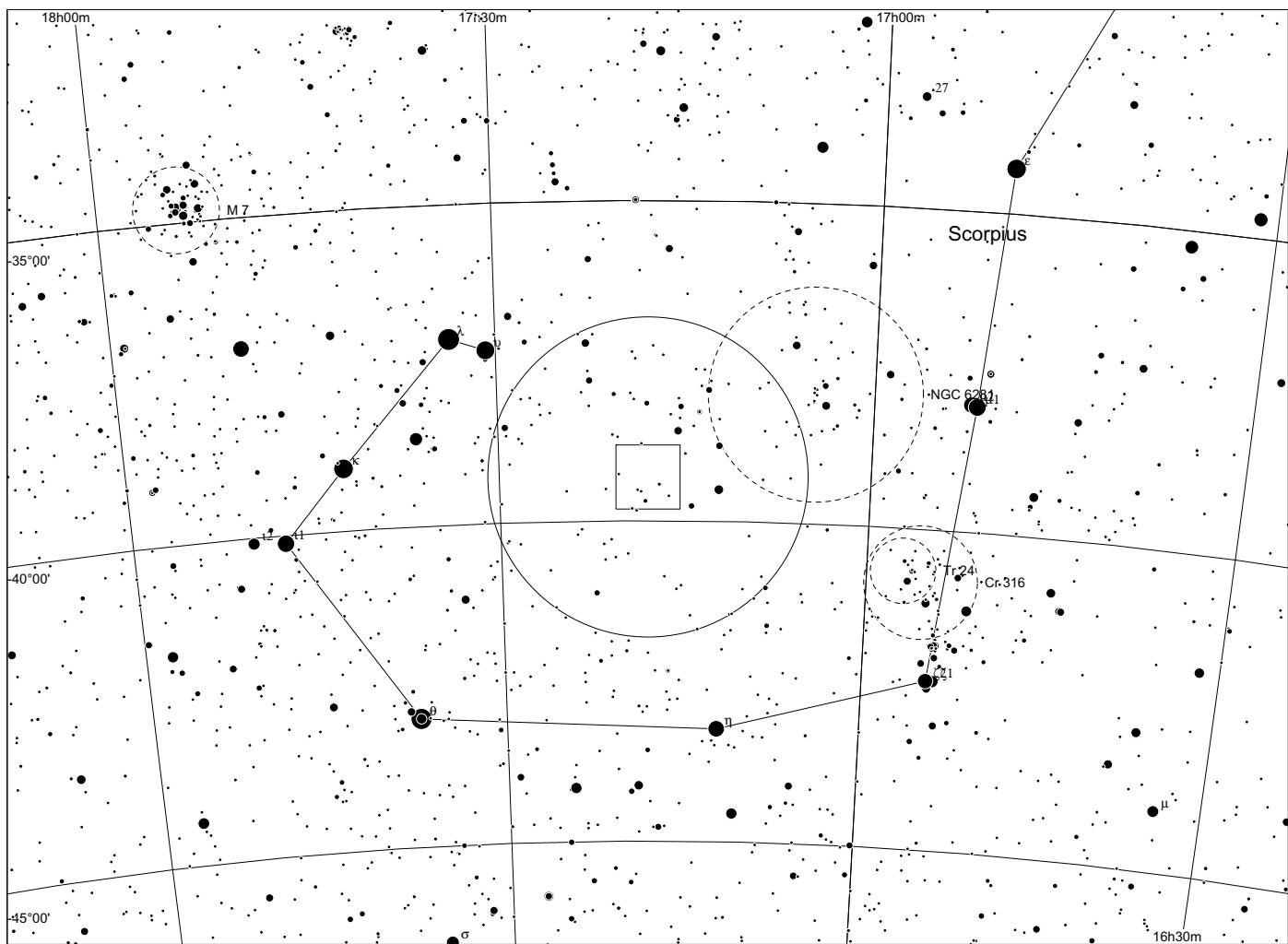
composite

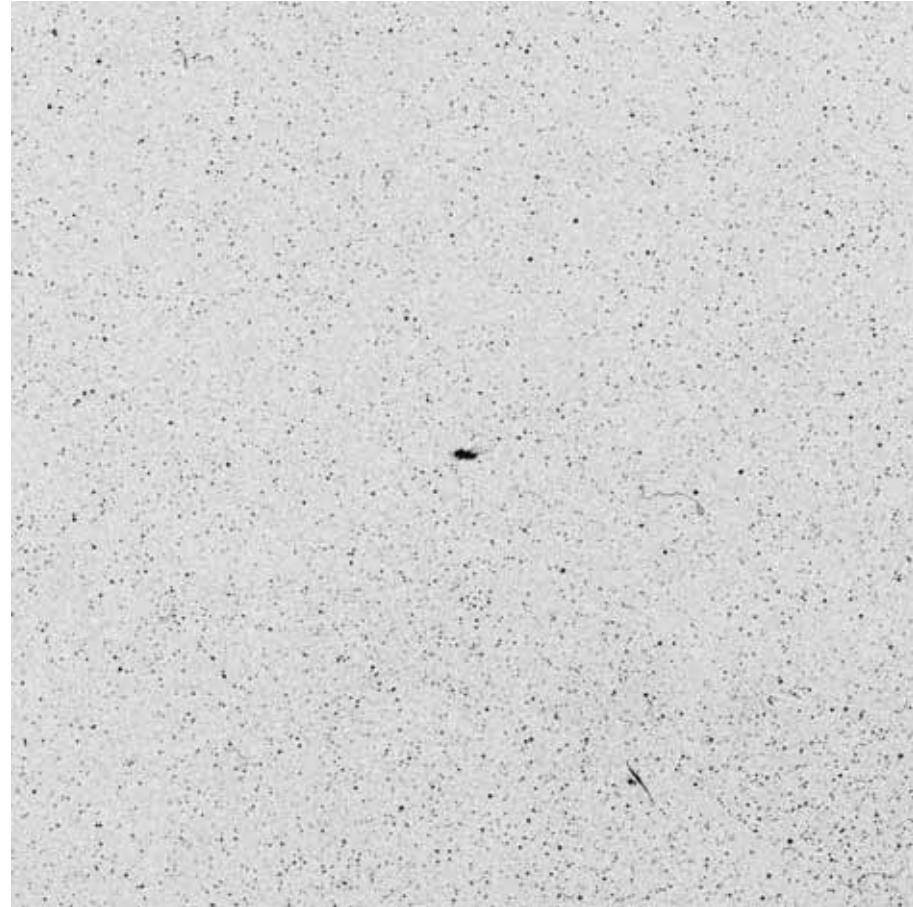
	other name	RA	dec	dia. '	F	S	B
Sh 2-004		17 19 48.5	-39 20 19	5	2	3	3

Distance: 2510 pc, Size: 0.9 pc, Source: [2003A&A...397..213P](#)

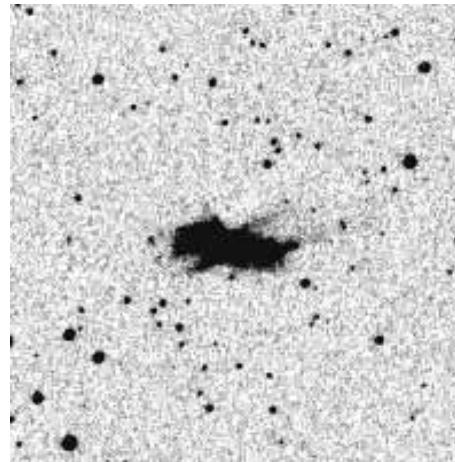
This HII region may be associated with the star cluster Havlen-Moffat 1.

Observing notes:

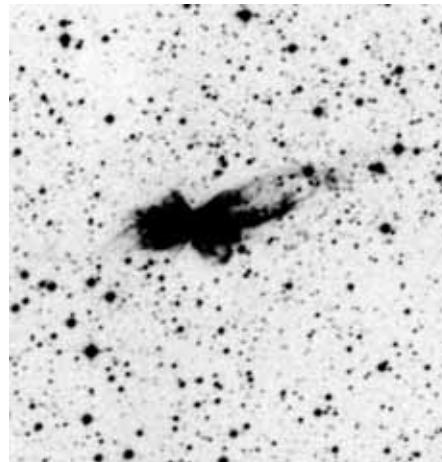


Sh 2 - 6**in Scorpius**

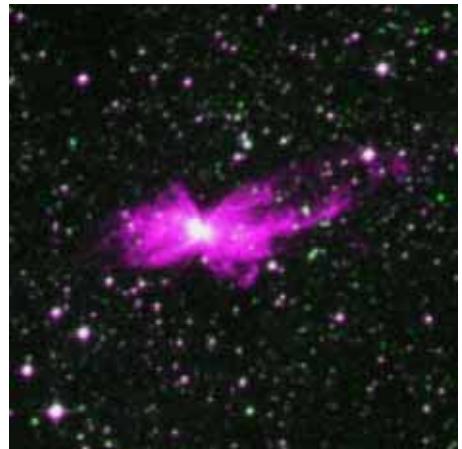
60x60, blue



POSS blue



POSS red



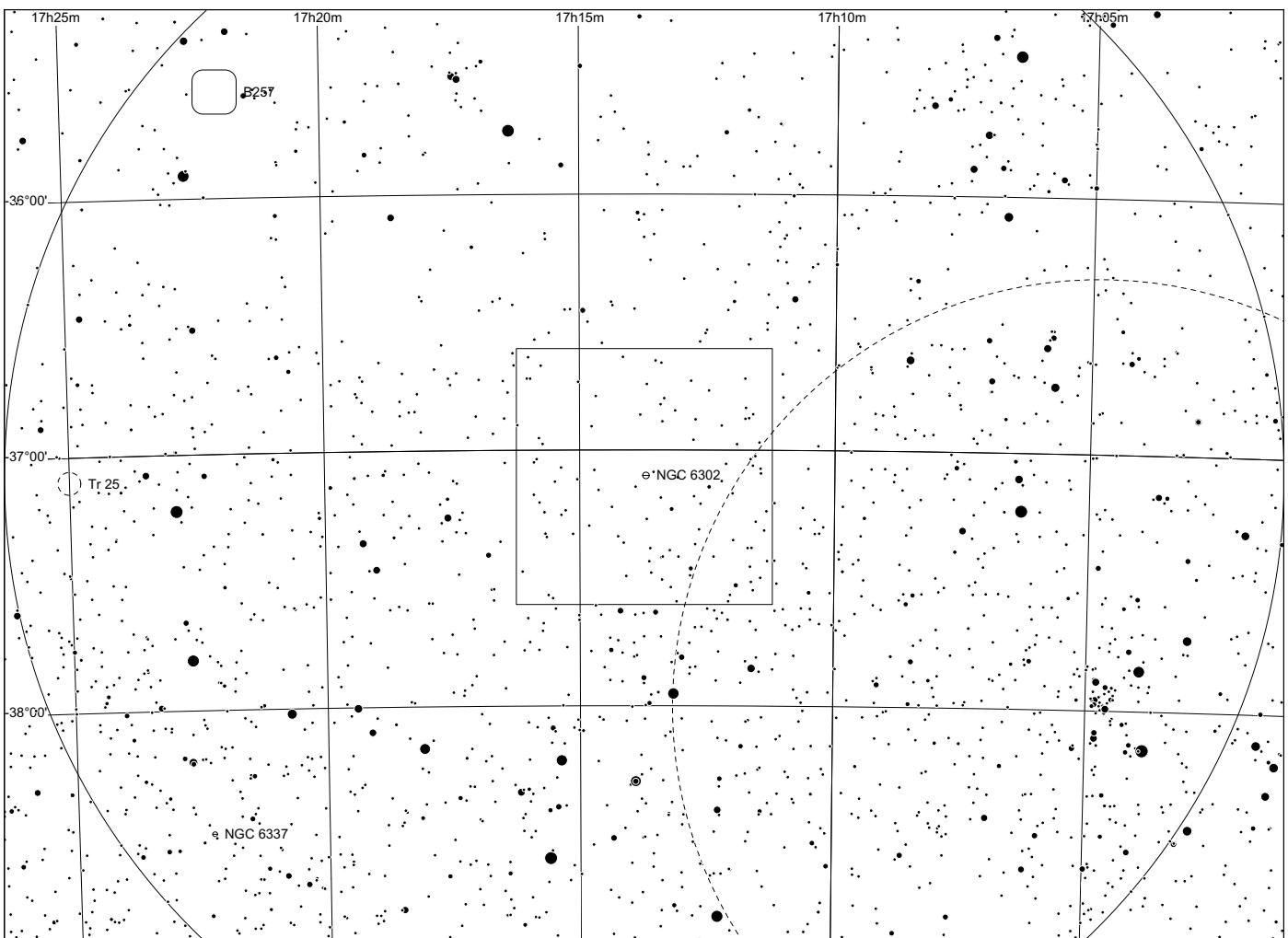
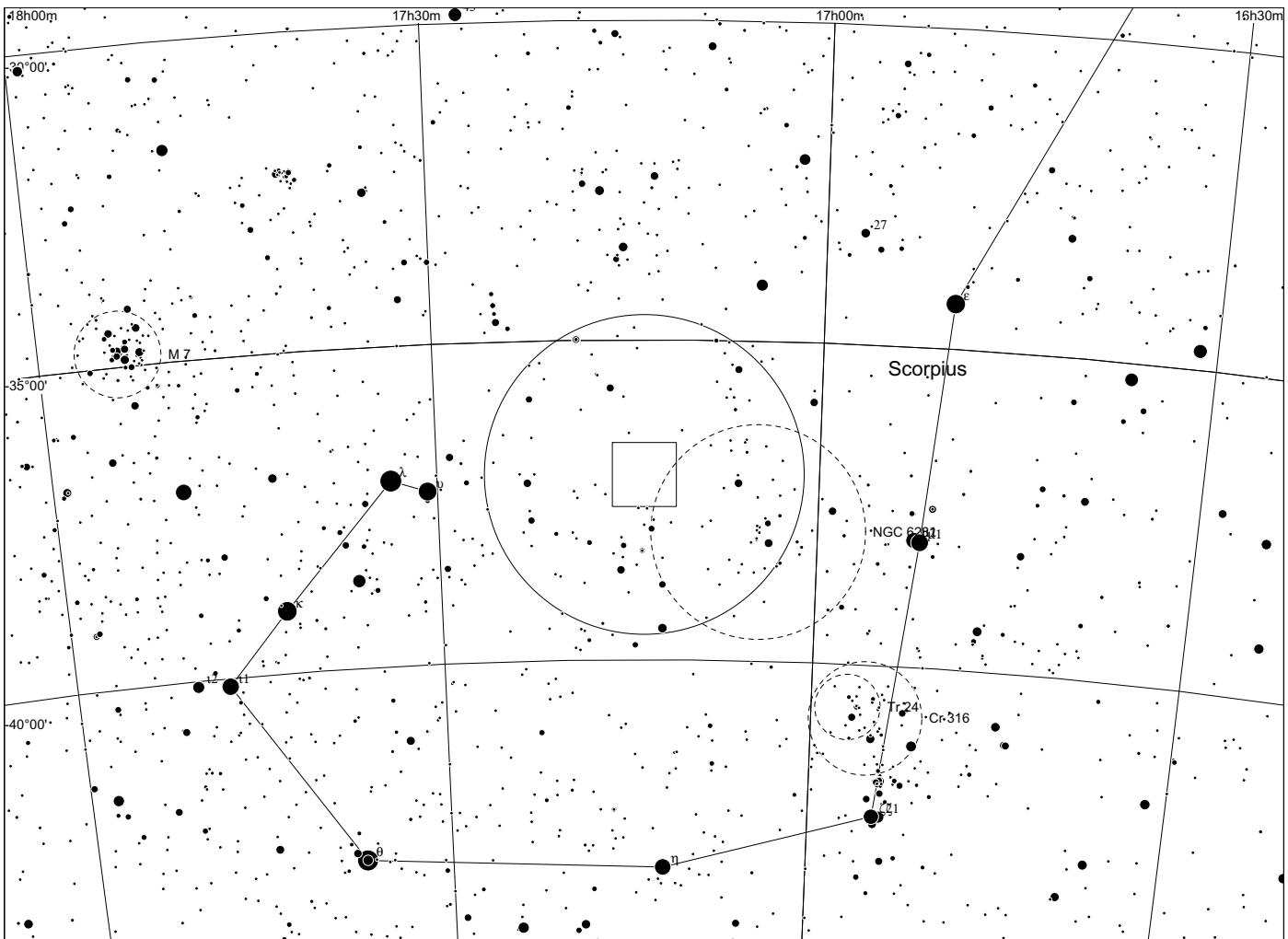
composite

	other name	RA	dec	dia. '	F	S	B
Sh 2-006	Bug nebula	17 15 03.2	-37 06 60	4	3	2	3

Distance: 910 pc, Size: 1.1 pc, Source: [2002A&A...394..679K](#)

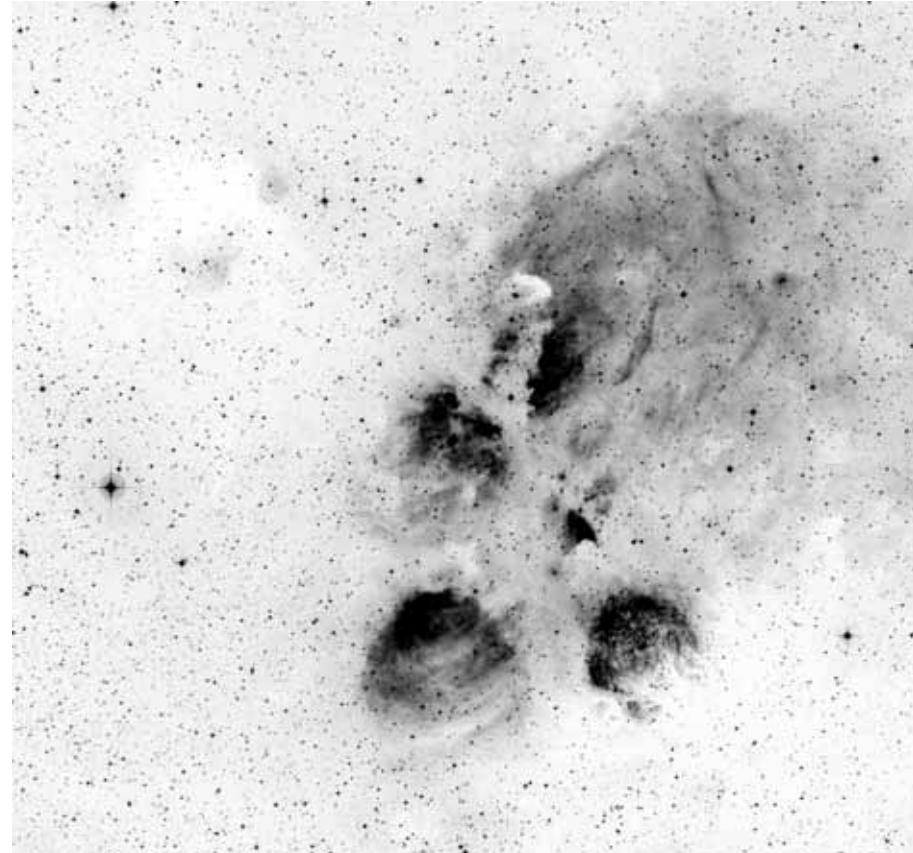
This is the Bug nebula, a planetary nebula.

Observing notes:

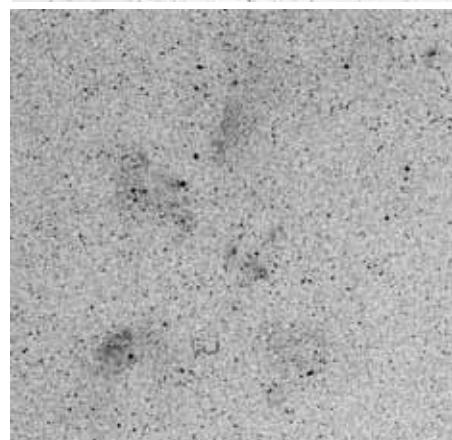


Sh 2 - 8

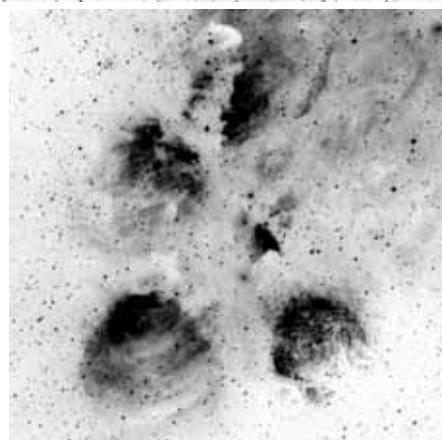
in Scorpius



60x60, red



POSS blue



POSS red



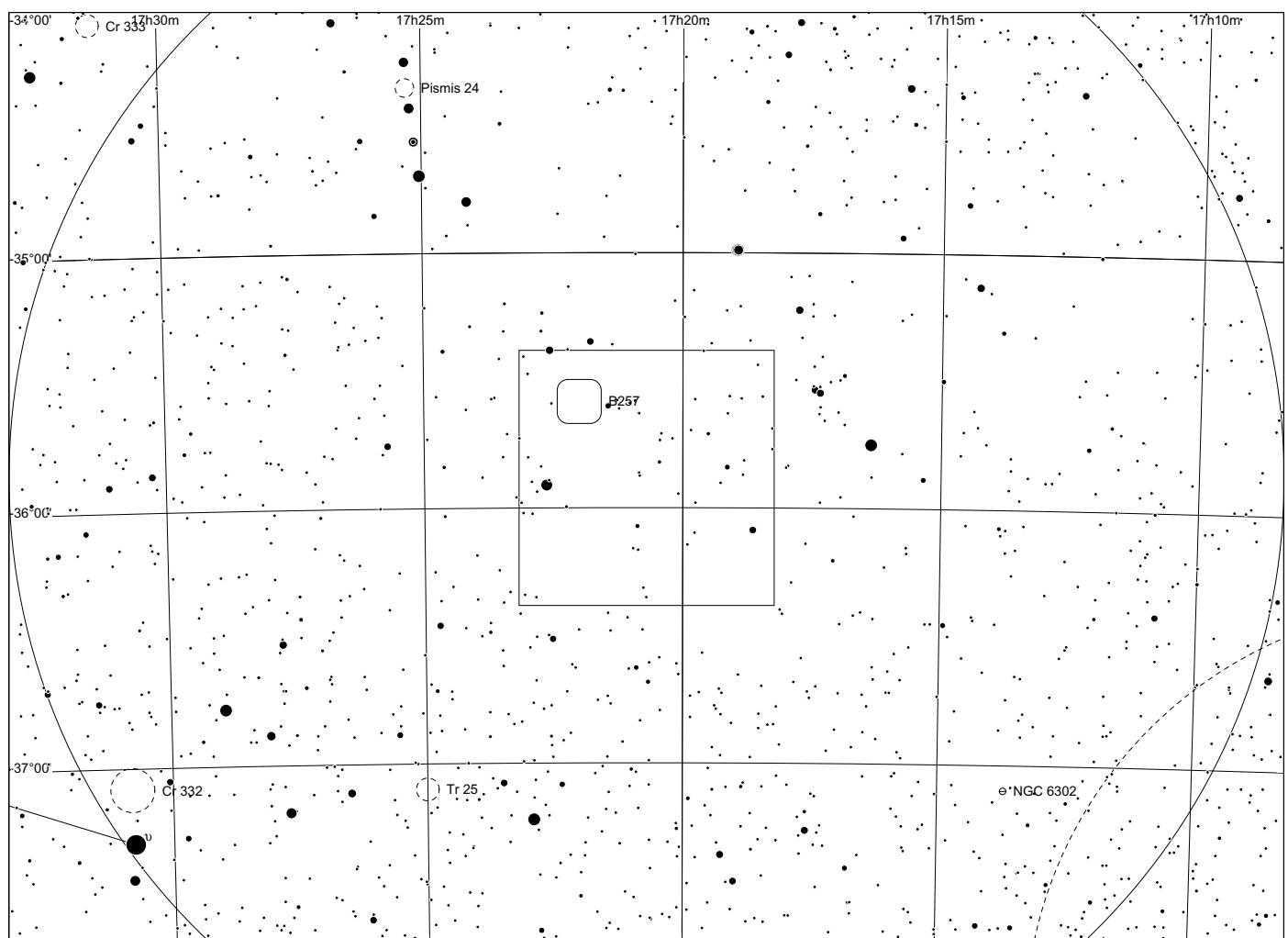
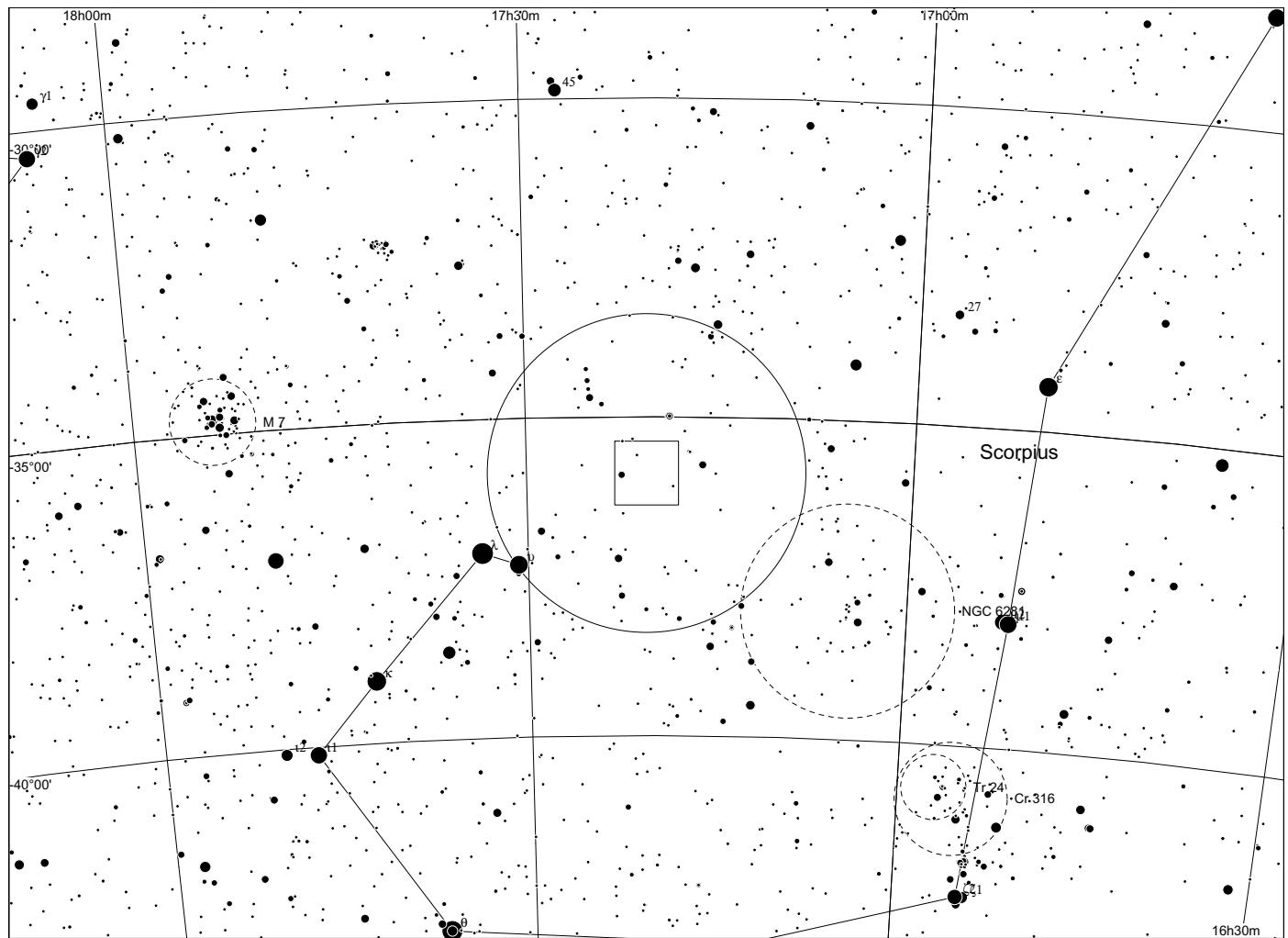
composite

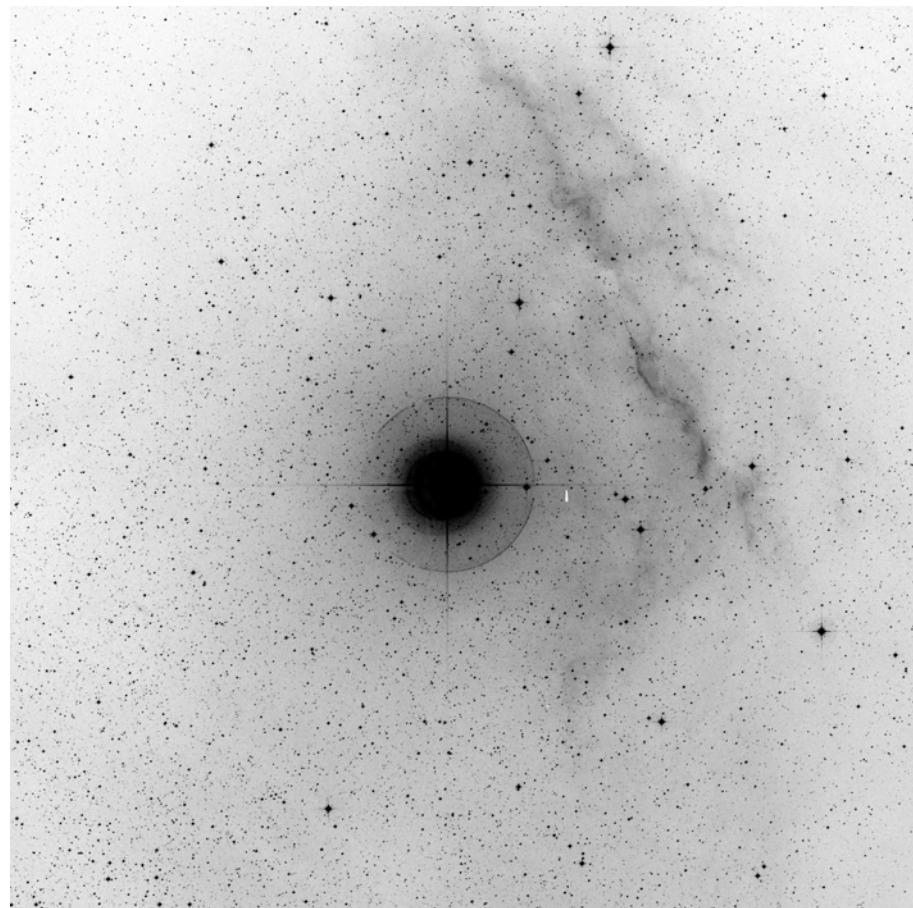
	other name	RA	dec	dia. '	F	S	B
Sh 2-008	NGC6334, Cat's paw	17 21 24.5	-36 02 05	120	3	3	3

Distance: 1700 pc, Size: 59.3 pc, Source: [1982ApJS...49..183B](#)

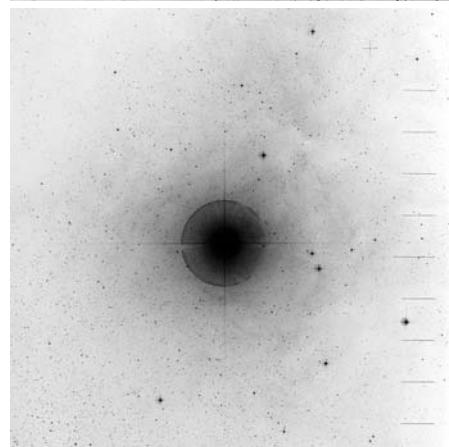
This is NGC 6334, the Cat's Paw nebula. This nebula contains five cloud fragments and at least eleven major infrared sources that are probably mostly cooler B stars. It lies at the same distance as [NGC 6357](#), the War and Peace nebula, and is separated from it by a dark cloud. You can [see both nebula together](#) in this image. The Gum catalog divides this nebula into six pieces (Gum 61, 62, 63, 64a, 64b and 64c).

Observing notes:

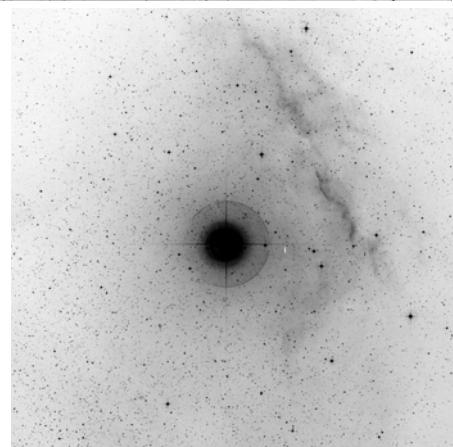


Sh 2 - 9**in Scorpius**

60x60, red



POSS blue



POSS red



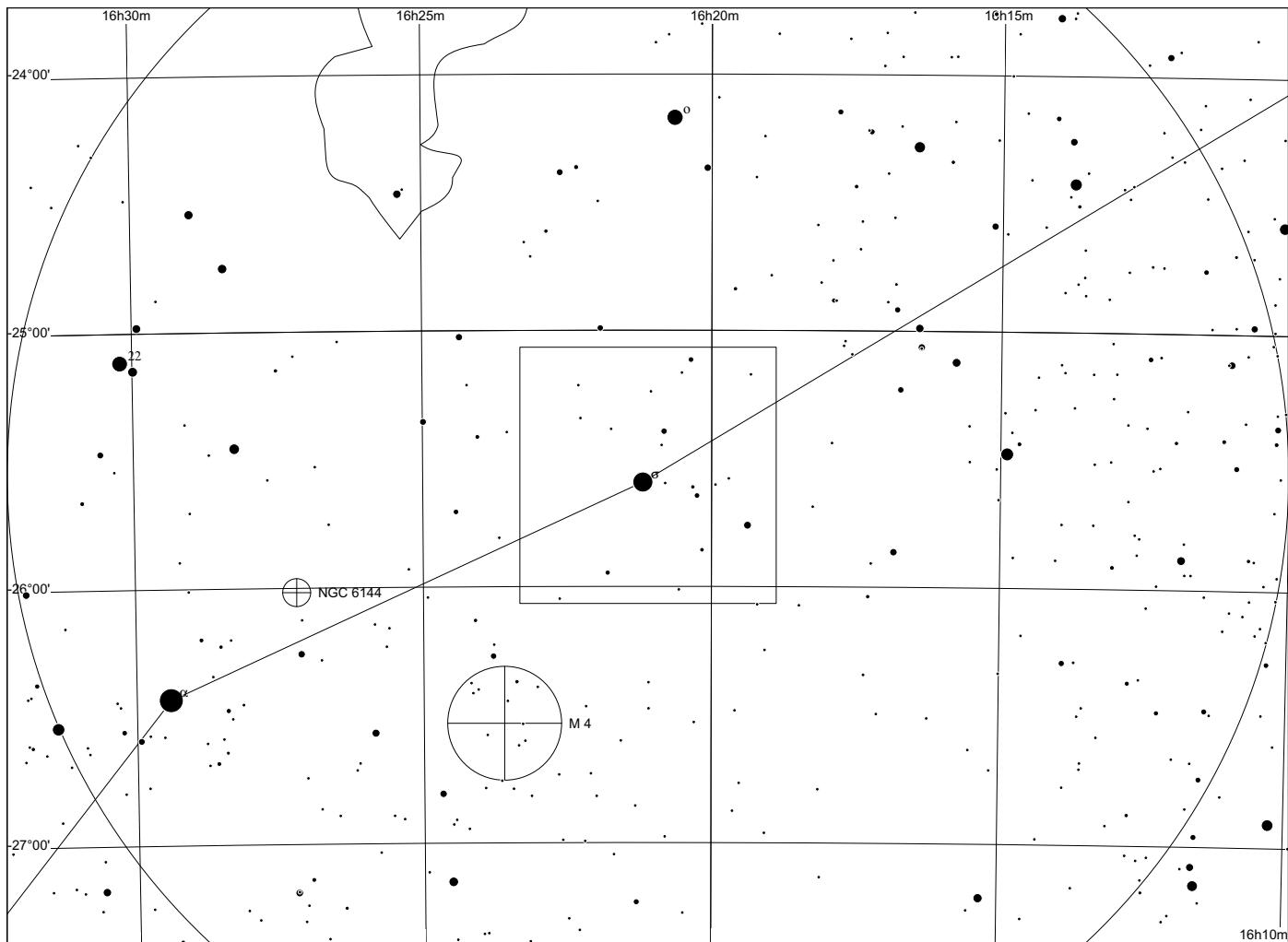
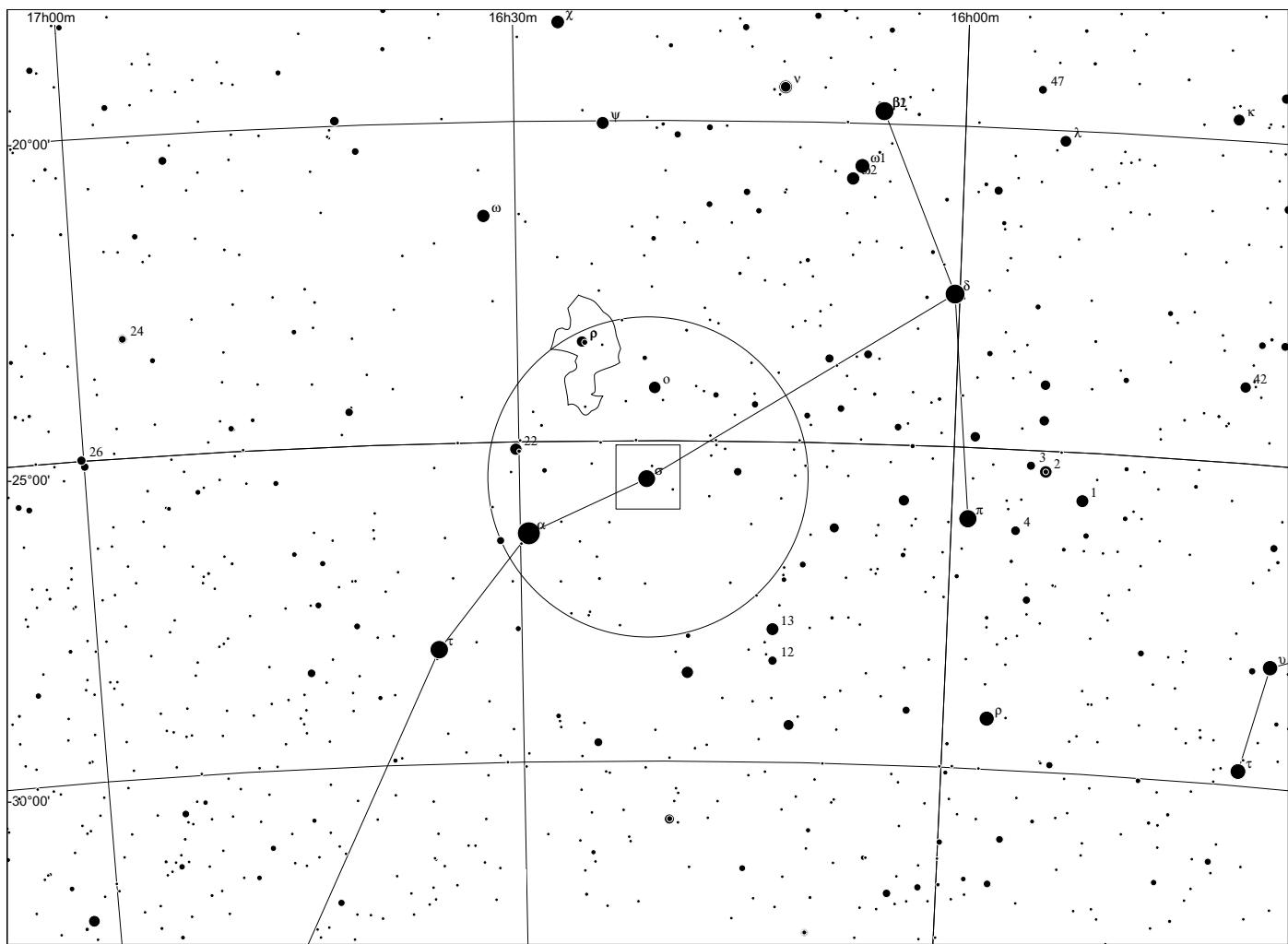
RGB Dean Salman

	other name	RA	dec	dia. '	F	S	B
Sh 2-009		16 21 10.6	-25 35 22	80	3	2	2

Distance: 200 pc, Size: 4.7 pc, Source: [2003A&A...397..133R](#)

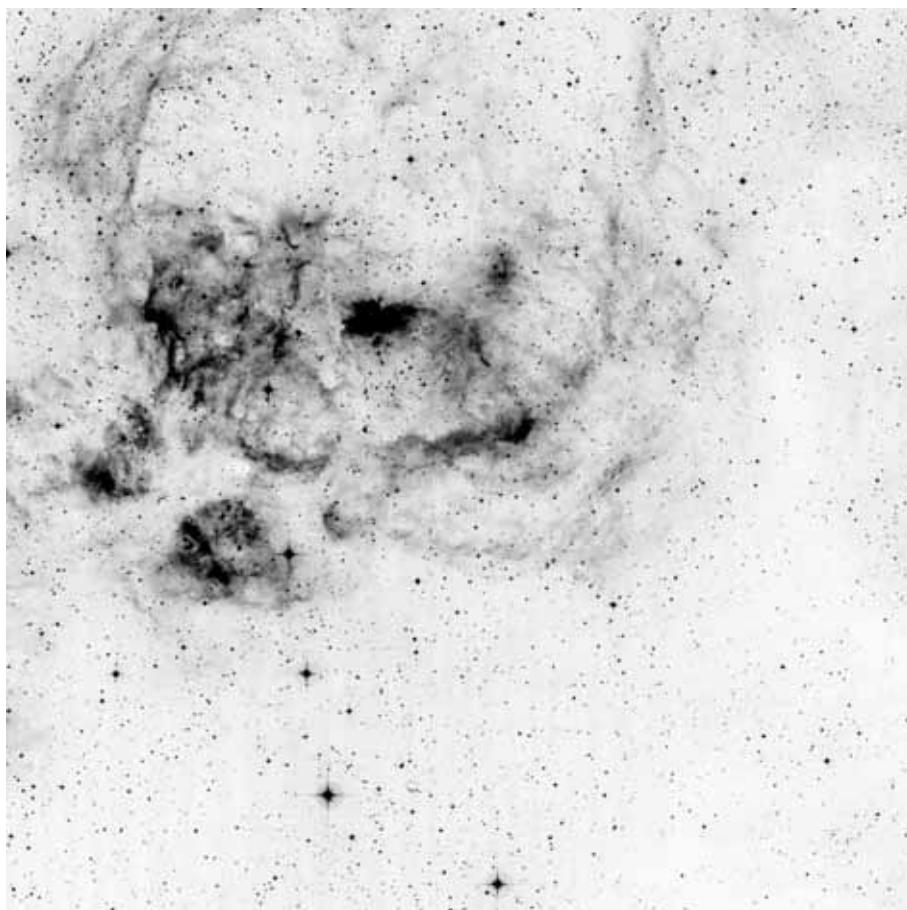
Associated with the star sigma Scorpii in the nearby Upper Scorpius subgroup of the Scorpius OB2 association.

Observing notes:

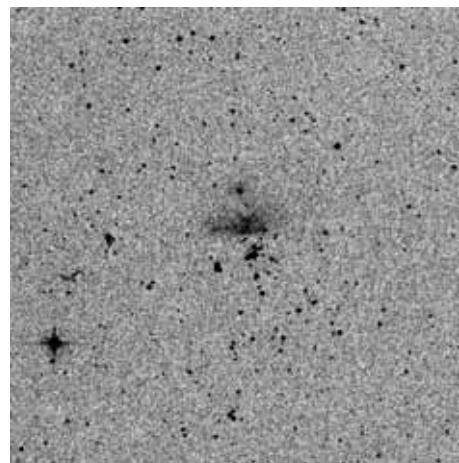


Sh 2 - 11

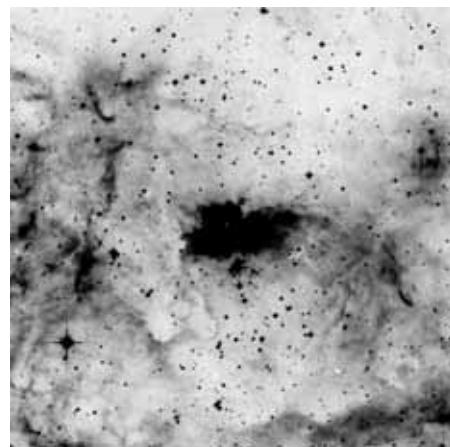
in Scorpius



60x60, red



POSS blue



POSS red



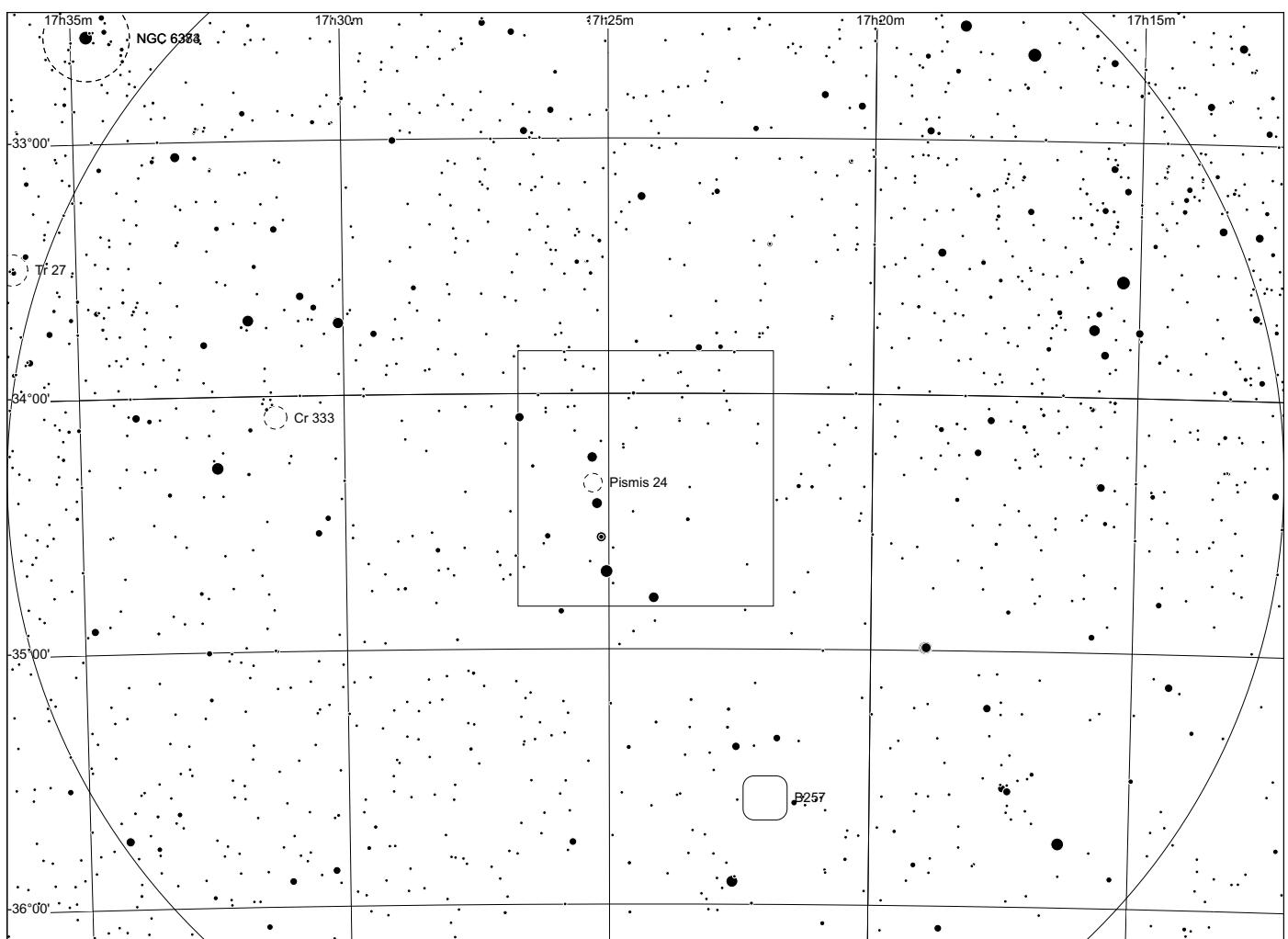
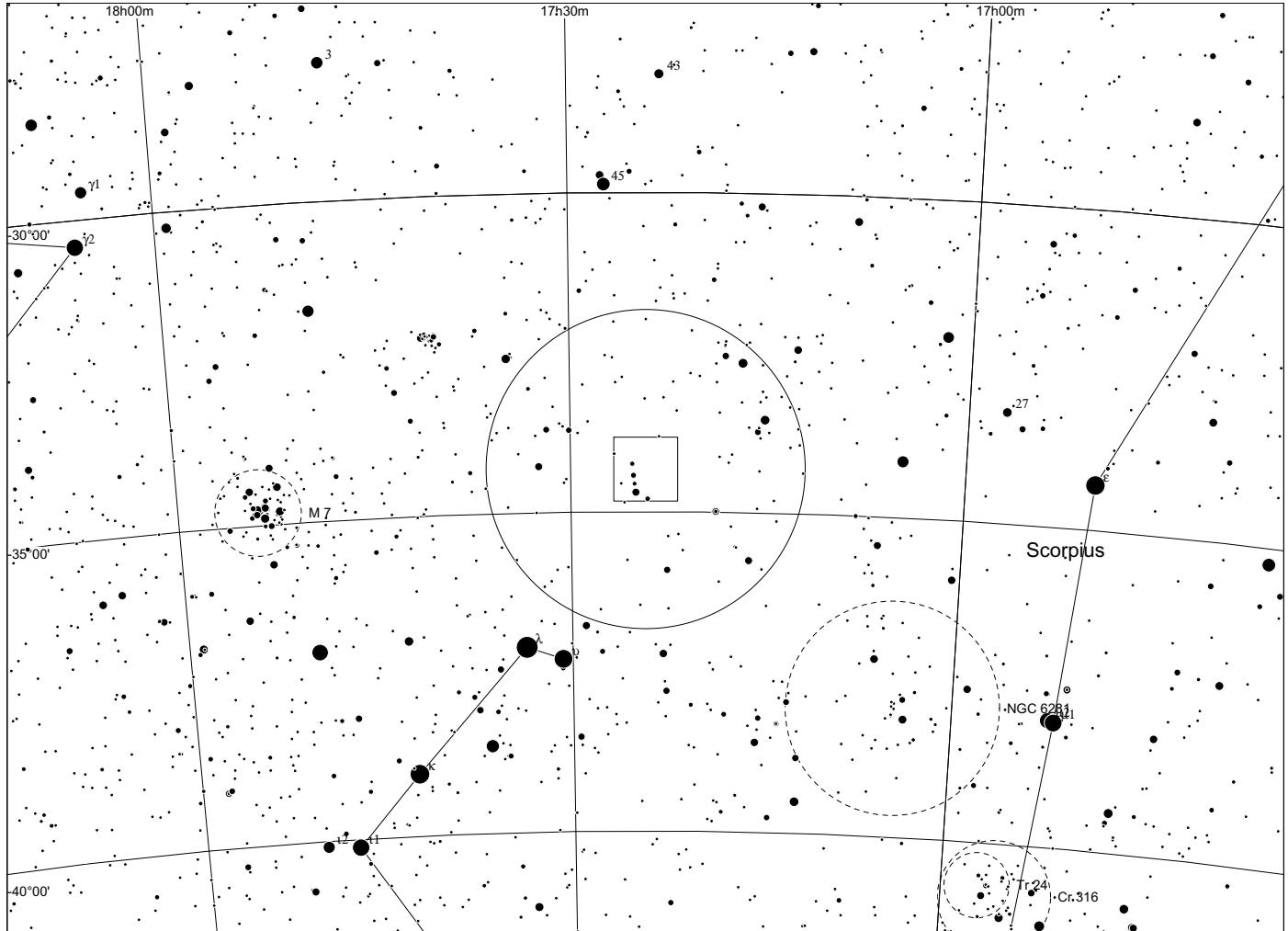
composite

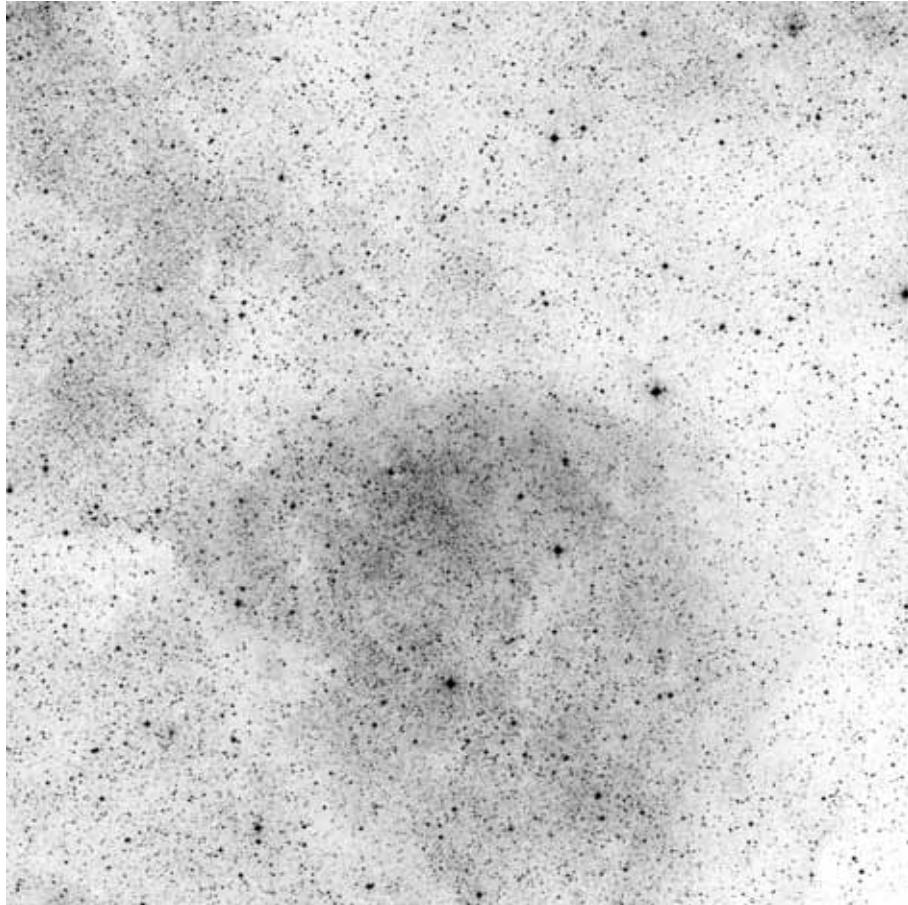
	other name	RA	dec	dia. '	F	S	B
Sh 2-011	N6357:	17 26 30.6	-34 12 20	90	3	3	3

Distance: 1740 pc, Size: 45.6 pc, Source: [1982ApJS...49..183B](#)

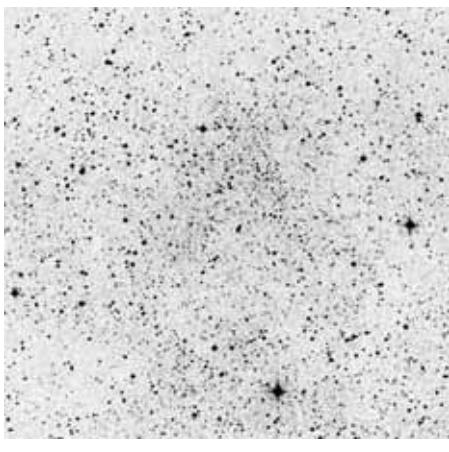
This is the star formation region W22, also called the War and Peace Nebula or NGC 6357. Contains the star cluster Pismis 24 which includes a multiple O4 and O4-5 star system. Near by is the Wolf-Rayet star WR 93, which is also a multiple star system with a class O7-9 companion. At the same distance as the Cat's Paw nebula [NGC 6334](#) and separated from it by a dark cloud.

Observing notes:

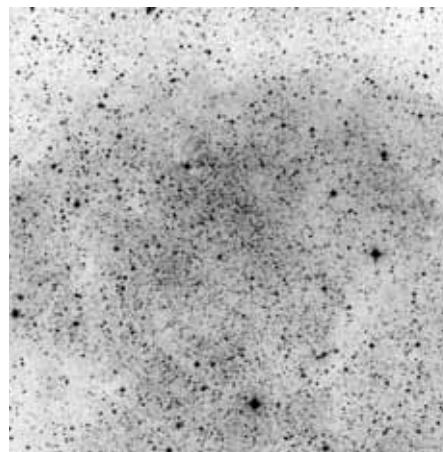


Sh 2 - 13**in Scorpius**

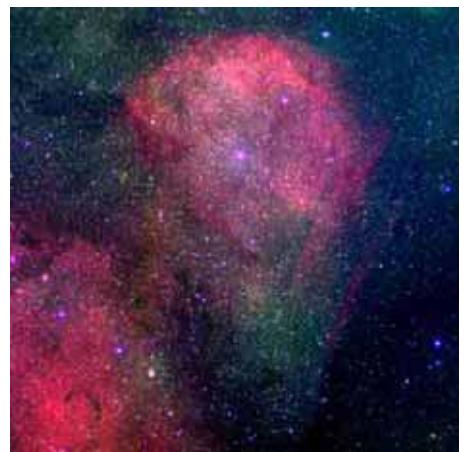
60x60, red



POSS blue



POSS red



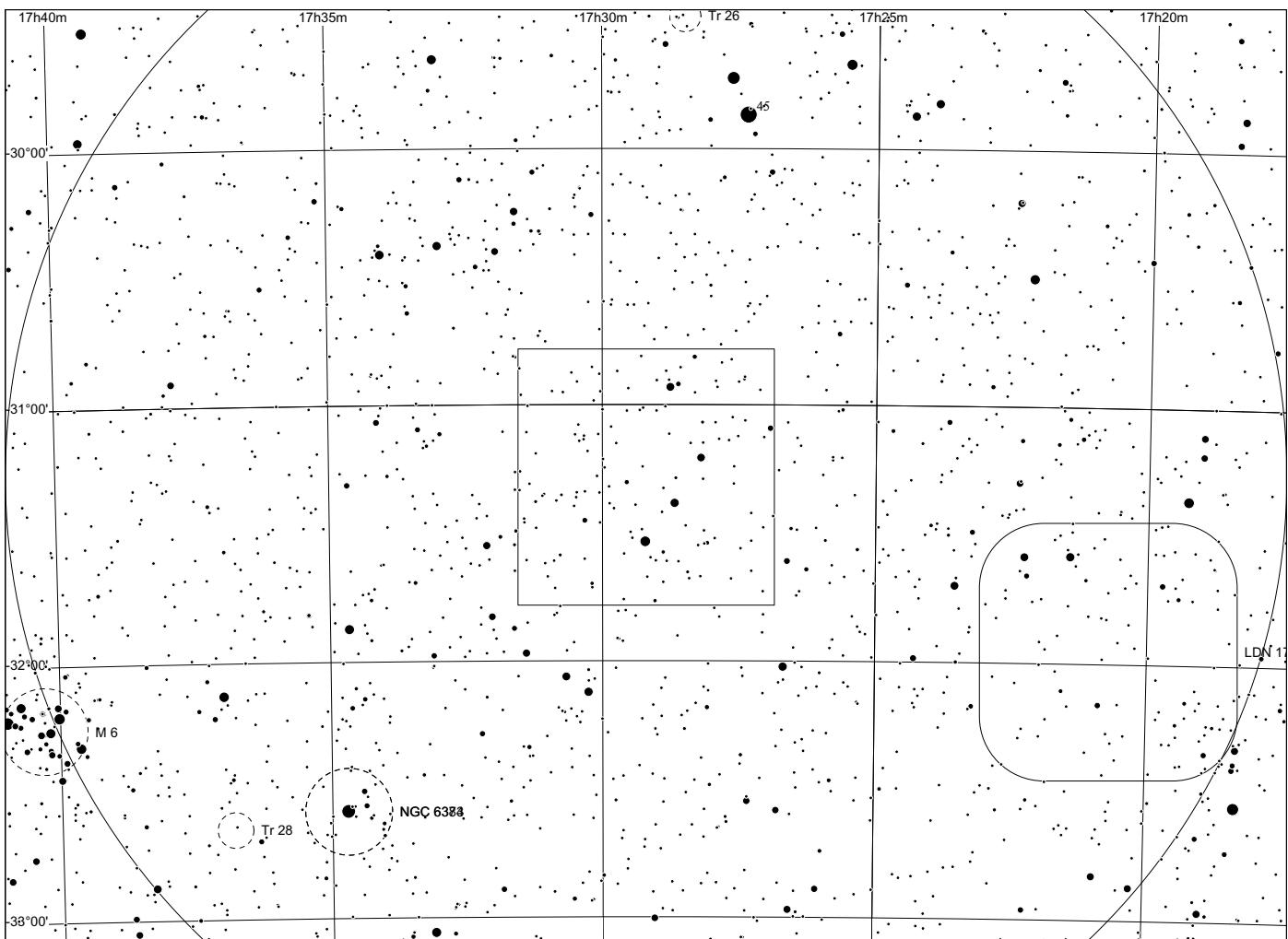
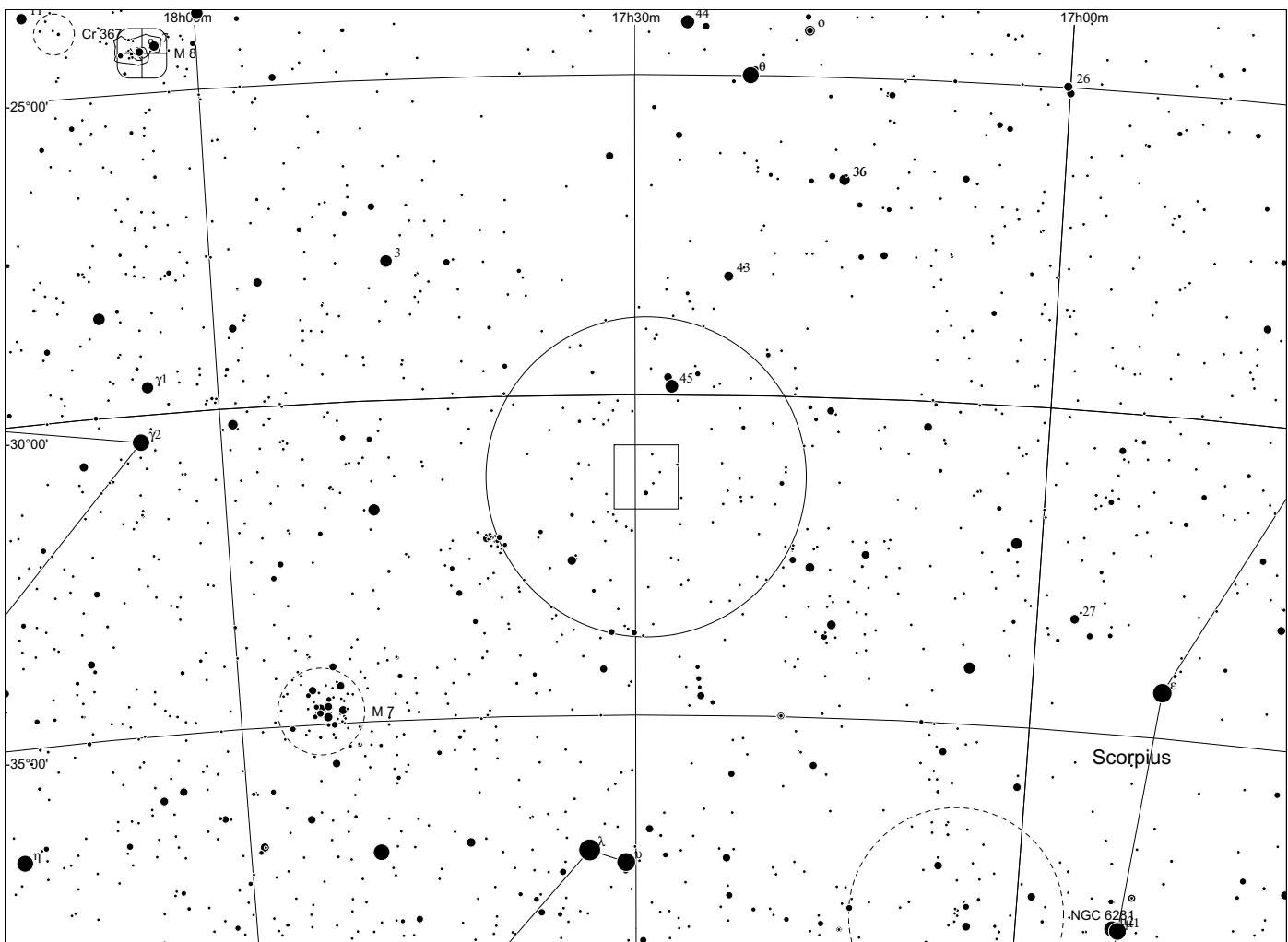
composite

	other name	RA	dec	dia. '	F	S	B
Sh 2-013		17 30 28.4	-31 33 46	40	2	2	2

Distance: 1200 pc, Size: 15.7 pc, Source: [1989BAICz..40...42A](#)

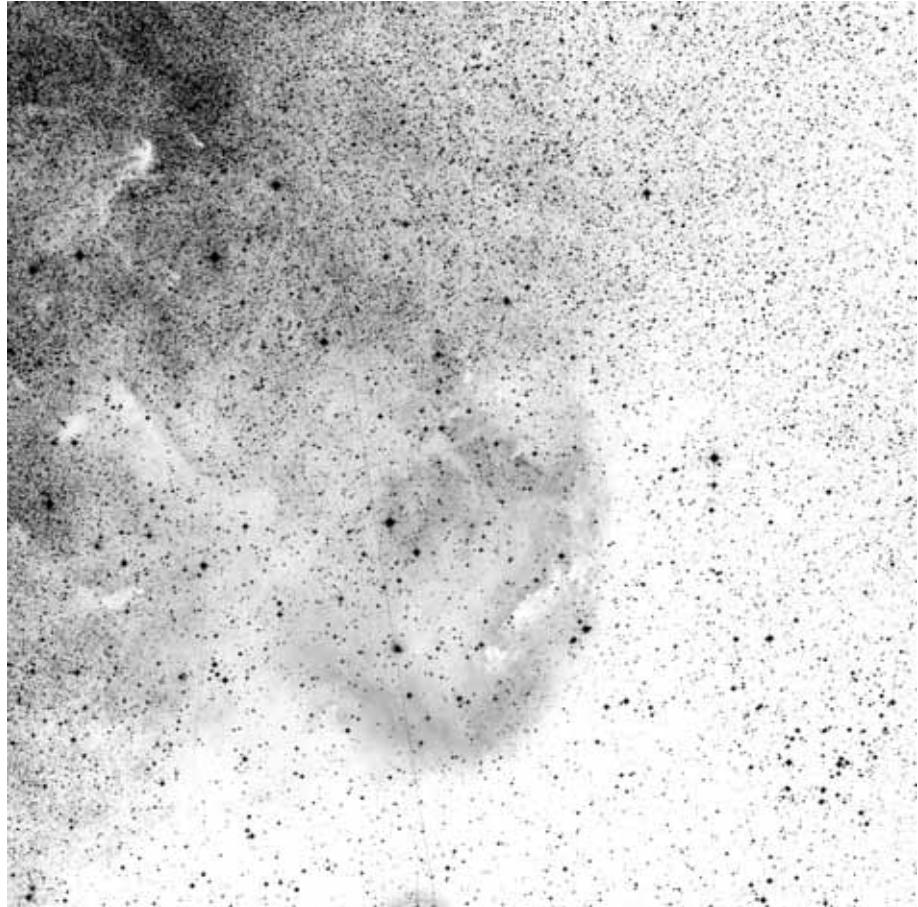
This nebula may be ionised by the O9.5V star HD 158186 and is next to Sh 2-12 (part of which is on the lower left of this image). HD 158186 may be a runaway star ejected from NGC 6383, the star cluster at the heart of Sh 2-12.

Observing notes:

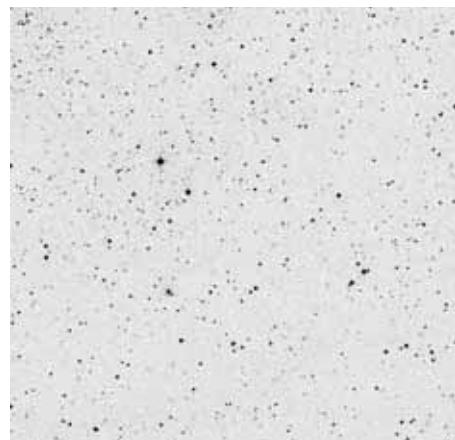


Sh 2 - 15

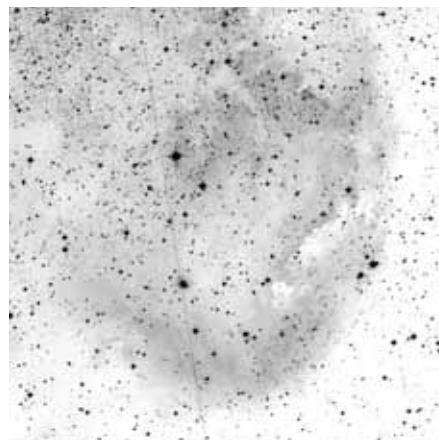
in Scorpius



60x60, red



POSS blue



POSS red



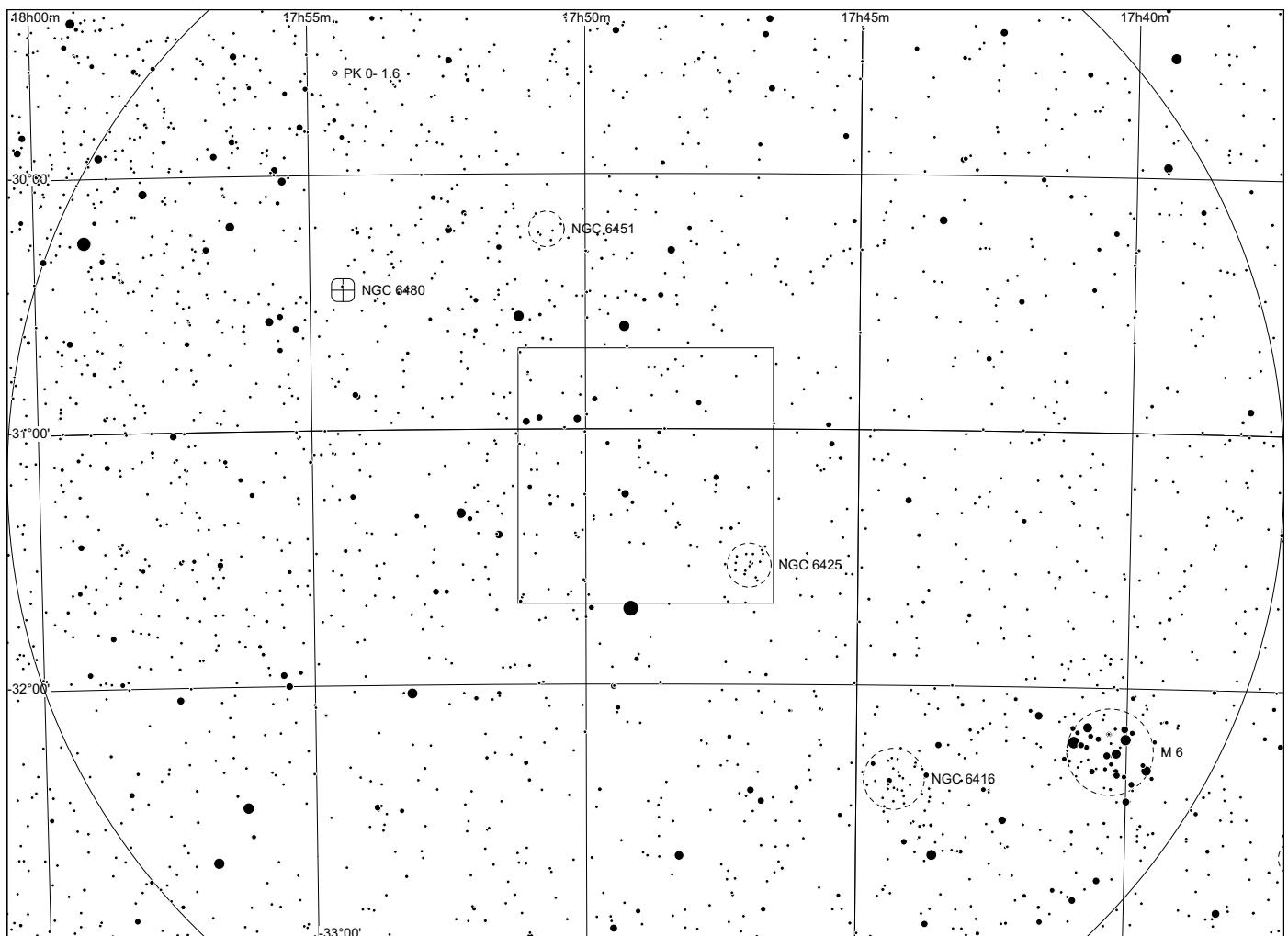
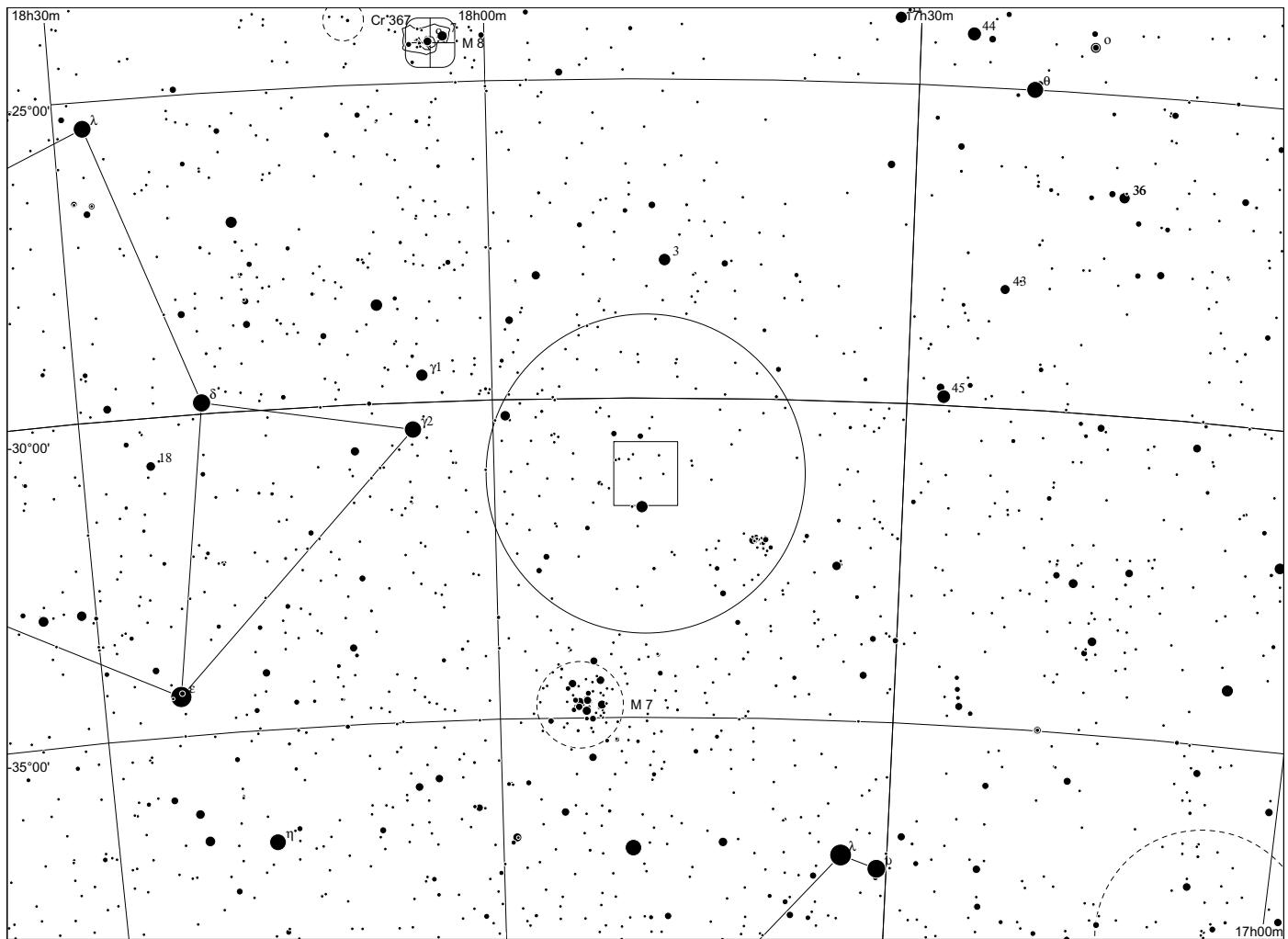
composite

	other name	RA	dec	dia. '	F	S	B
Sh 2-015		17 50 34.2	-31 15 50	30	2	2	2

Distance: 1500 pc, Size: 13.1 pc, Source: [2003A&A...397..133R](#)

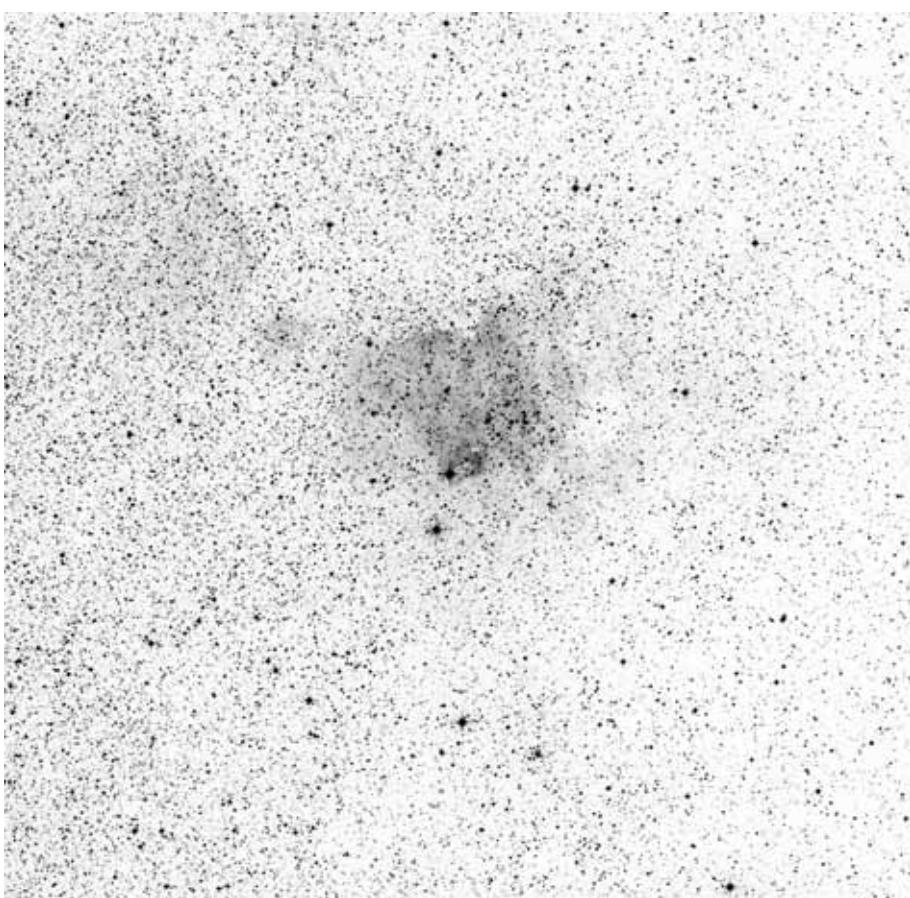
This HII region is ionised by the O8 V star HD 161853 and is part of the S15-S20 complex of HII regions. This region is also called W25 or Gum 69.

Observing notes:

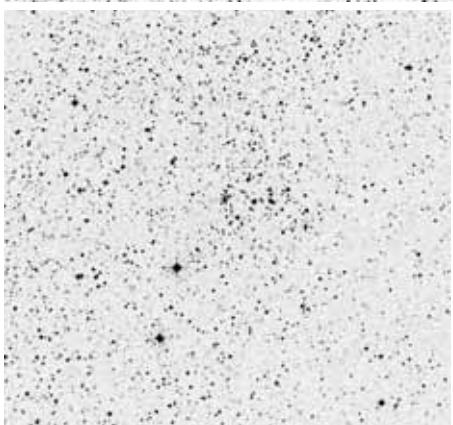


Sh 2 - 16

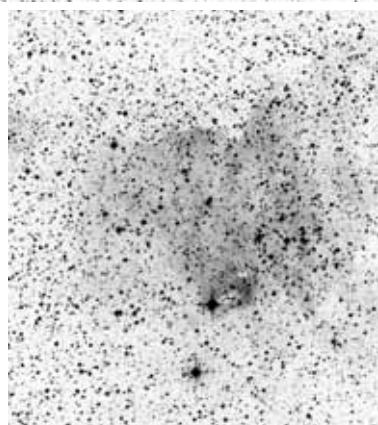
in Sagittarius



60x60, red



POSS blue



POSS red



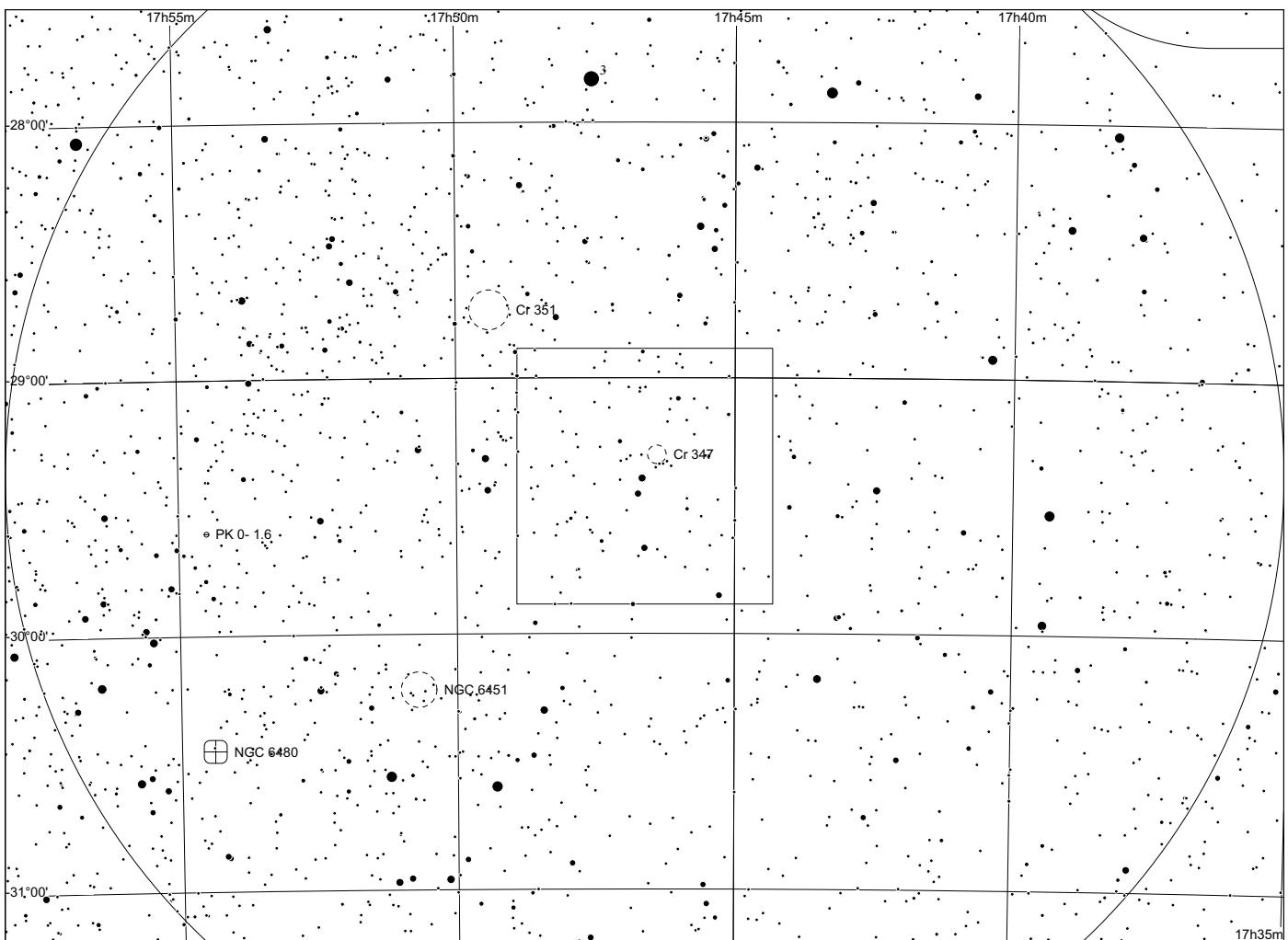
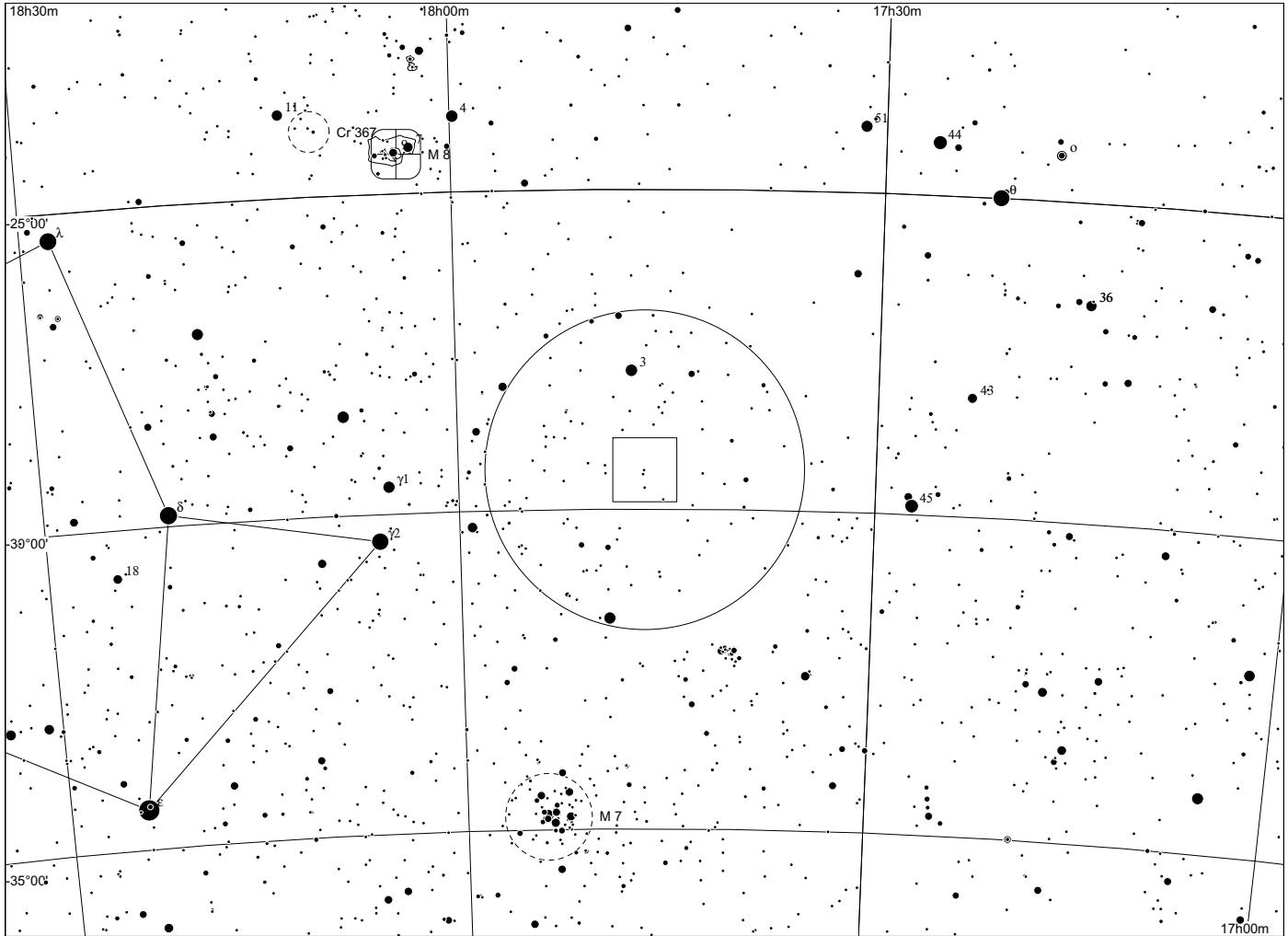
composite

	other name	RA	dec	dia. '	F	S	B
Sh 2-016		17 47 52.1	-29 18 14	20	3	2	2

Distance: 1500 pc, Size: 8.7 pc, Source: [2003A&A...397..133R](#)

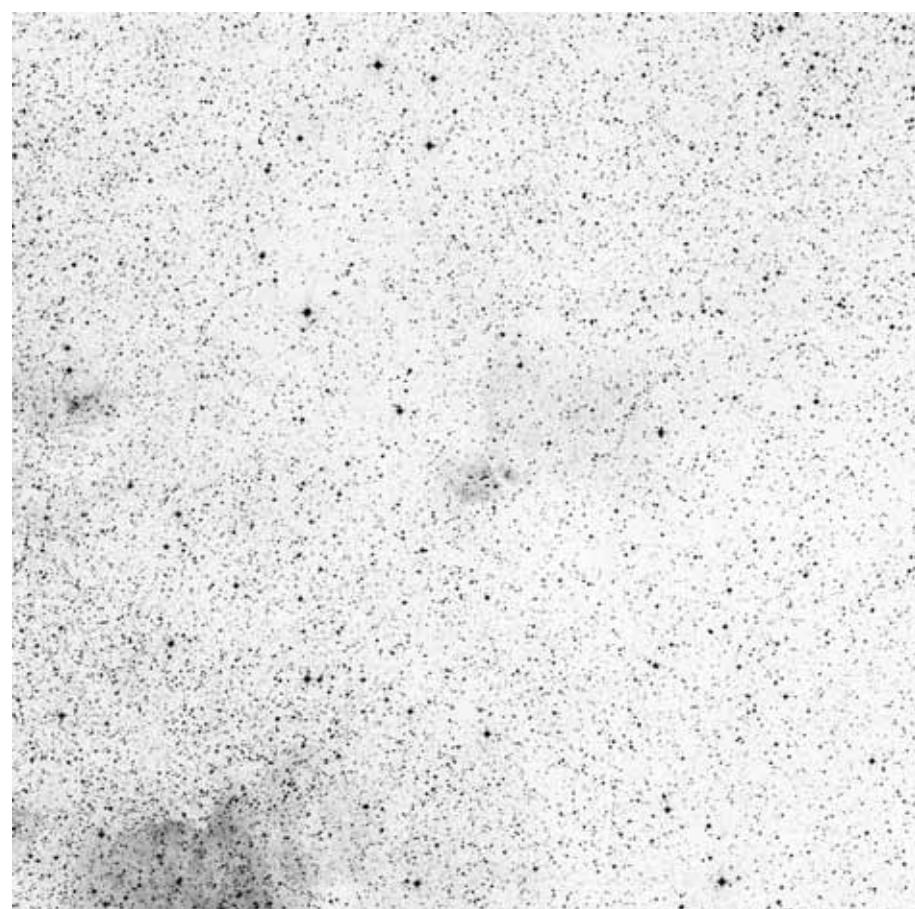
Part of the S15-S20 complex of HII regions. The star cluster Collinder 347, and the [DB 2000] 56 infra-red cluster both appear to be embedded in Sh 2-16. The intense gamma ray source 2EG J1746-2852 appears to be embedded in Collinder 347, however, since this cluster is in the same direction as the centre of the galaxy, it is also possible that 2EG J1746-2852 is generated by a source in the Arches cluster near the galactic centre.

Observing notes:

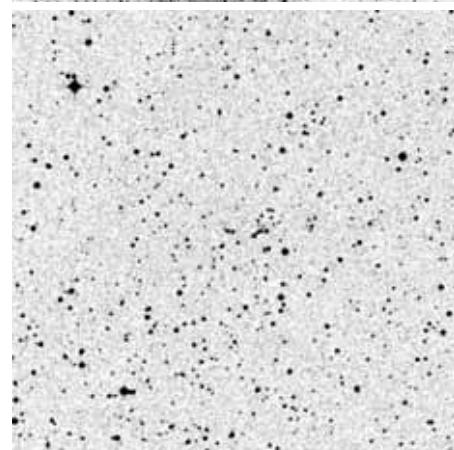


Sh 2 - 17

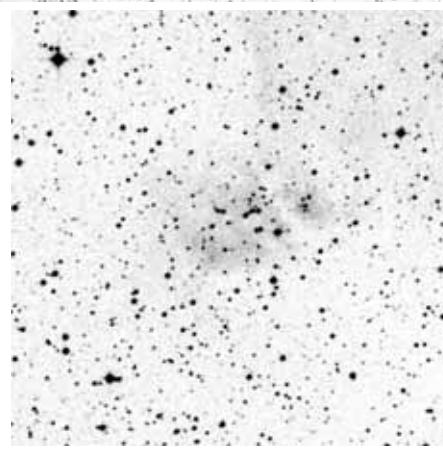
in Sagittarius



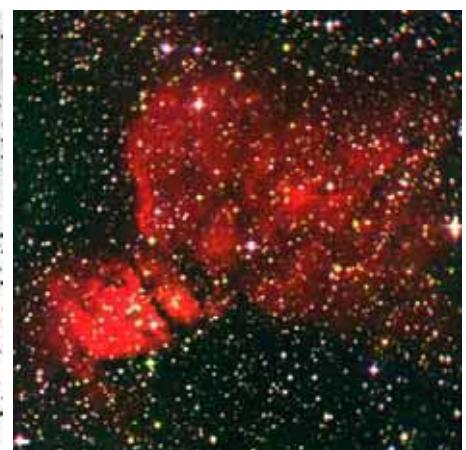
60x60, red



POSS blue



POSS red



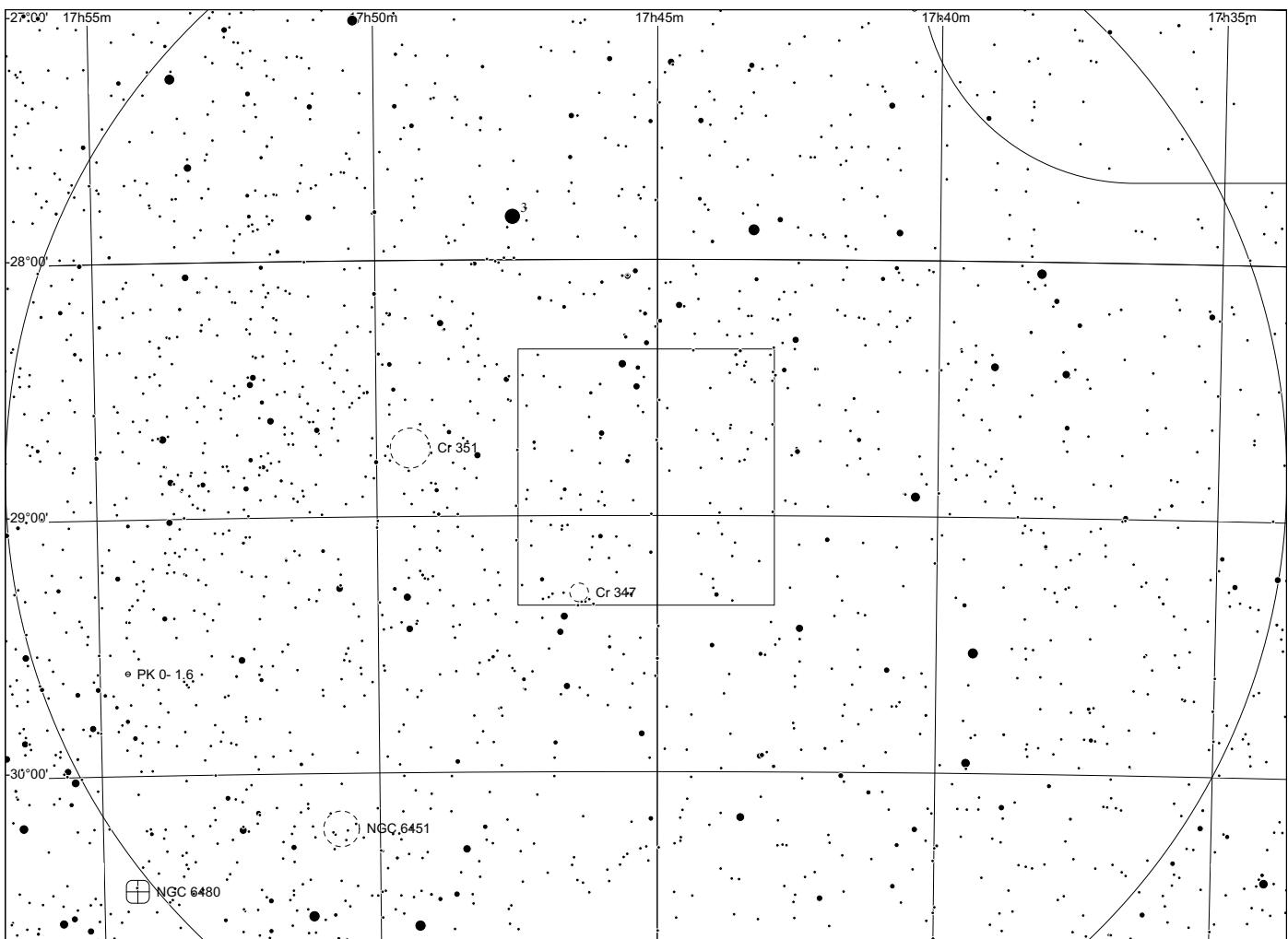
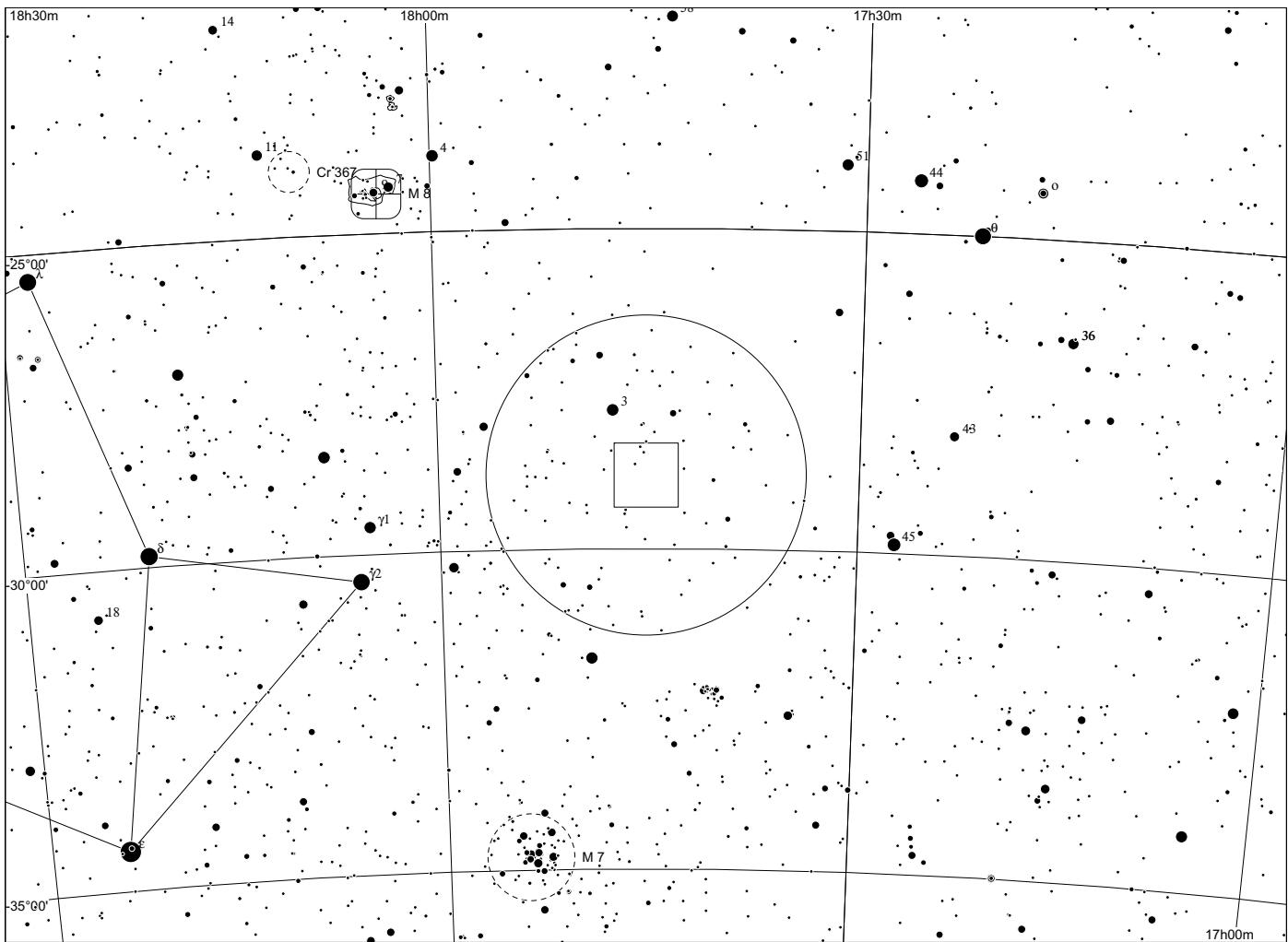
composite

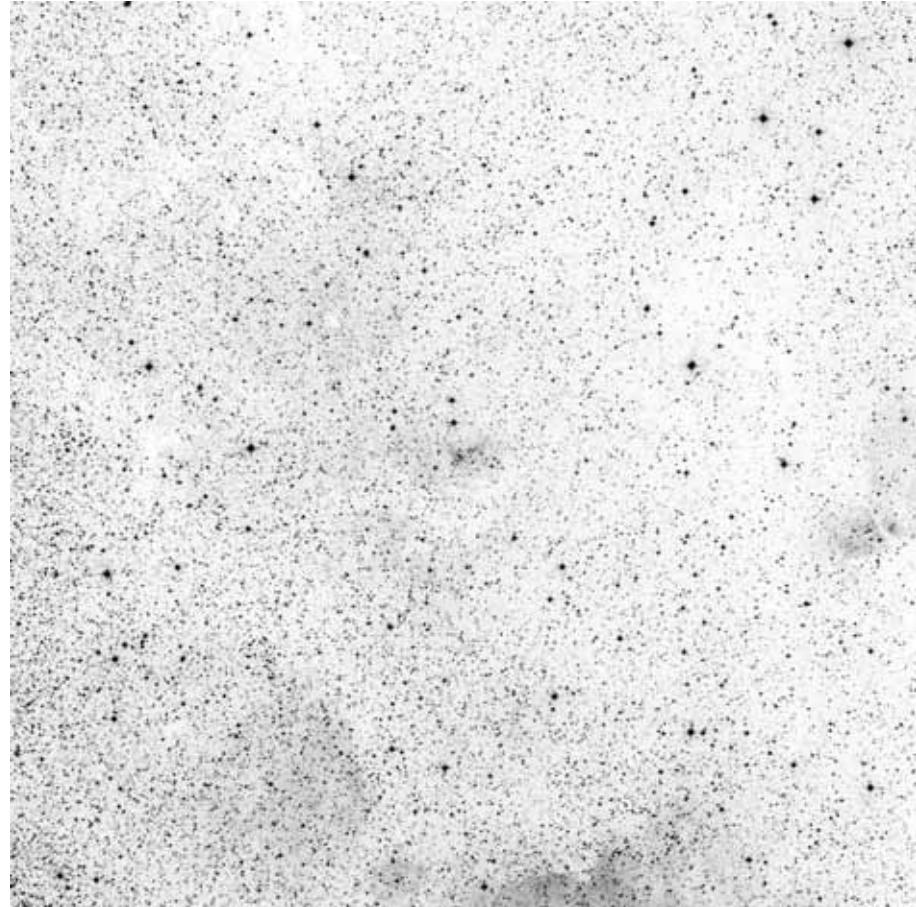
	other name	RA	dec	dia. '	F	S	B
Sh 2-017		17 46 08.4	-28 51 28	25	3	2	2

Distance: 1500 pc, Size: 10.9 pc, Source: [2003A&A...397..133R](#)

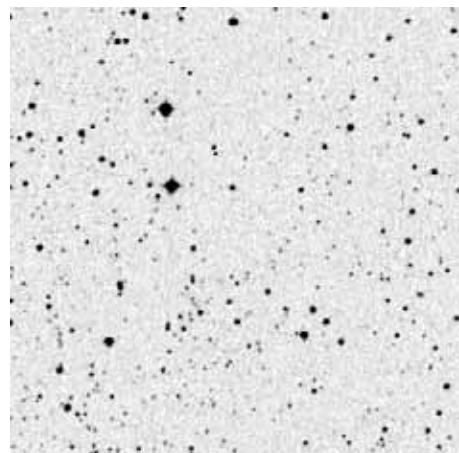
Part of the S15-S20 complex of HII regions. About a dozen stars associated with this HII region may form the infrared star cluster [DB2000] 58

Observing notes:

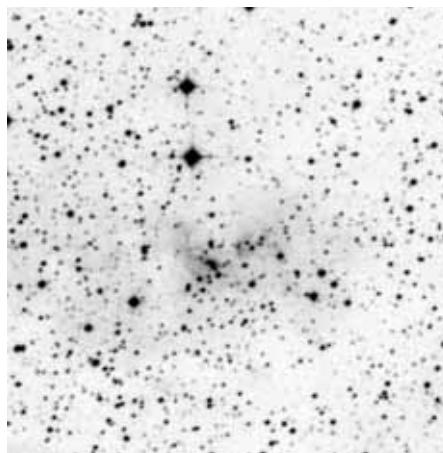


Sh 2 - 20**in Sagittarius**

60x60, red



POSS blue



POSS red



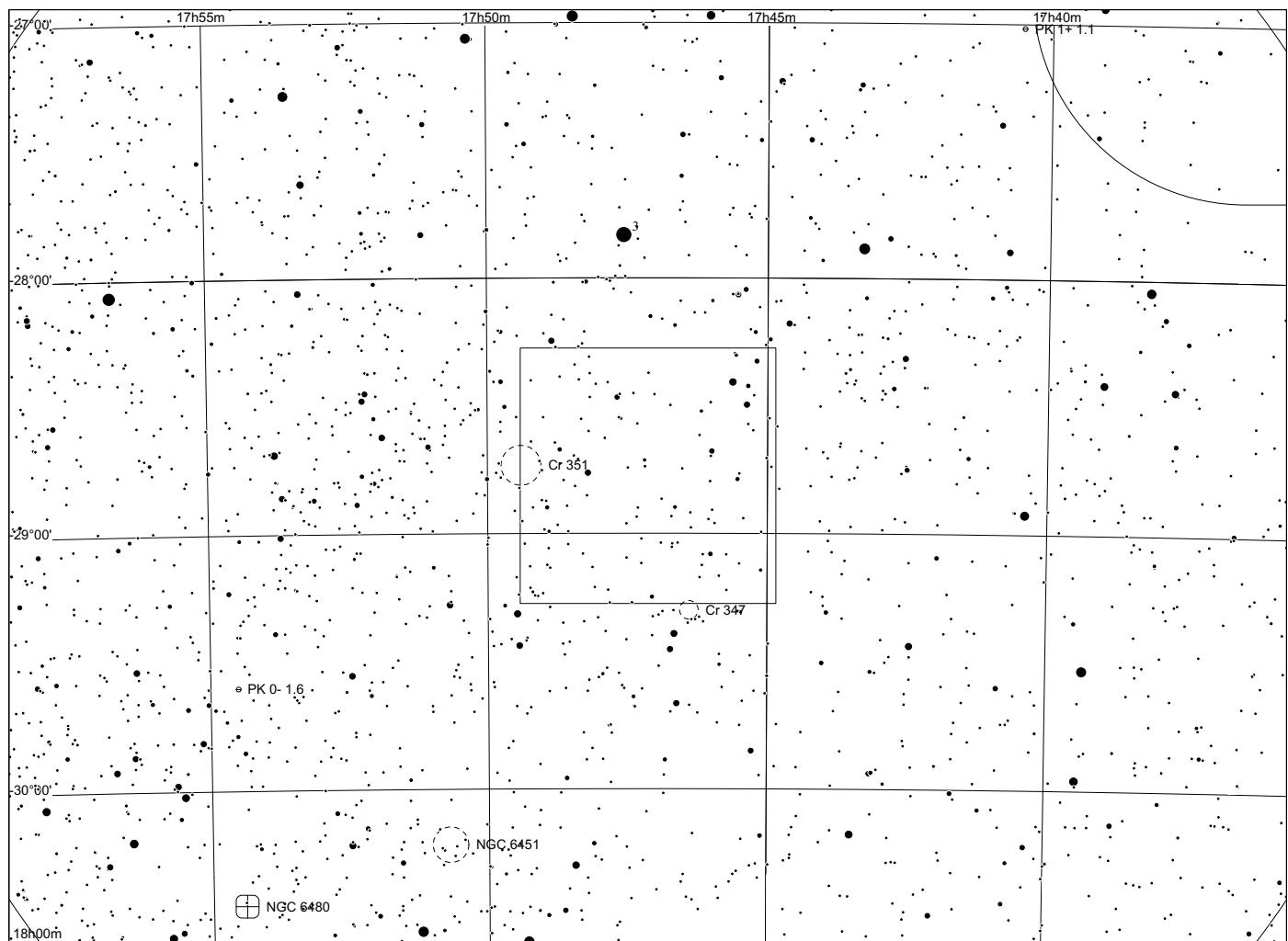
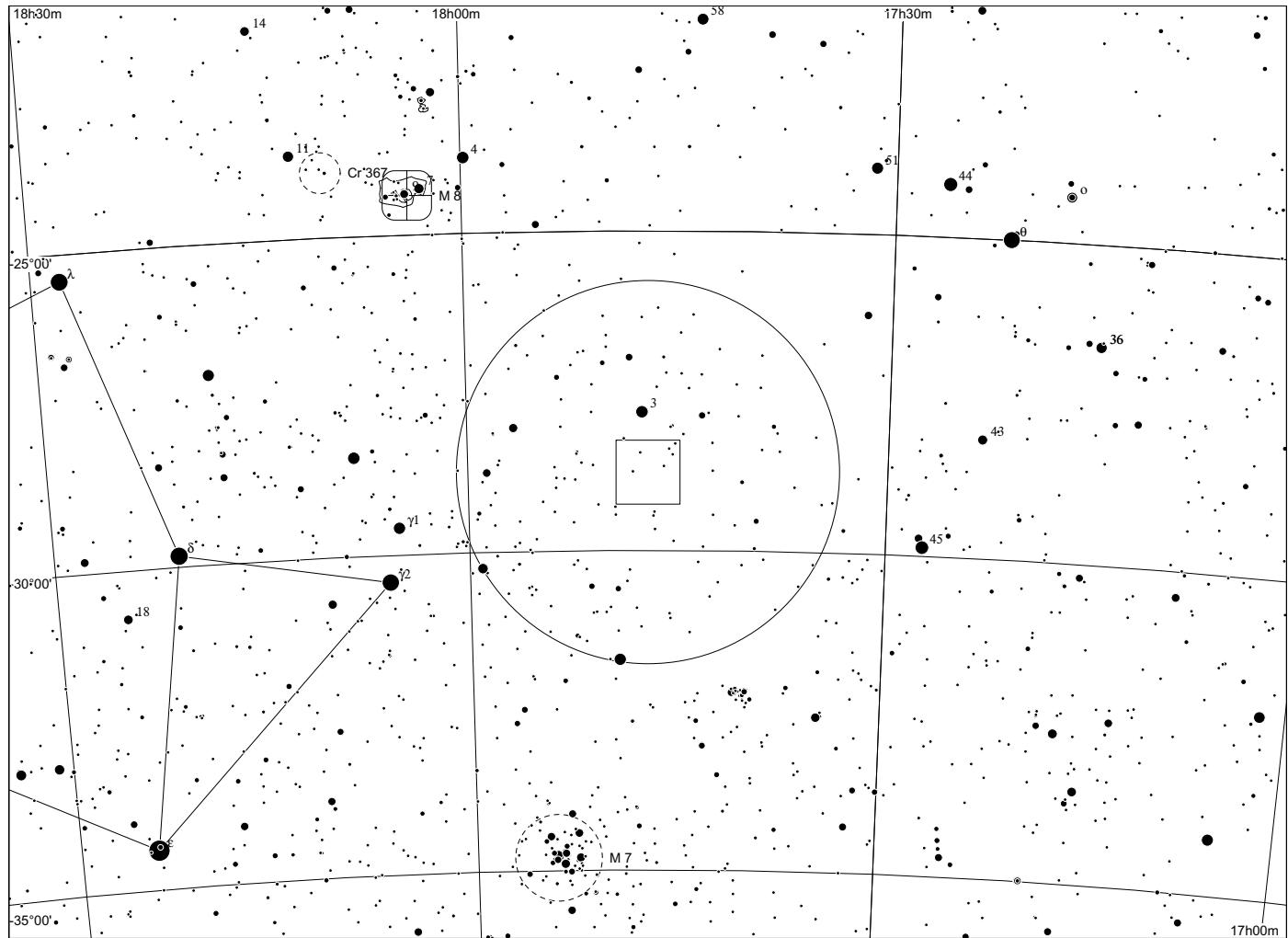
composite

	other name	RA	dec	dia. '	F	S	B
Sh 2-020		17 49 14.2	-28 40 02	10	3	2	2

Distance: 1500 pc, Size: 4.4 pc, Source: [2003A&A...397..133R](#)

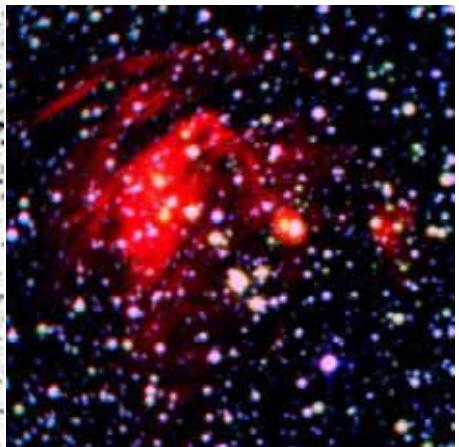
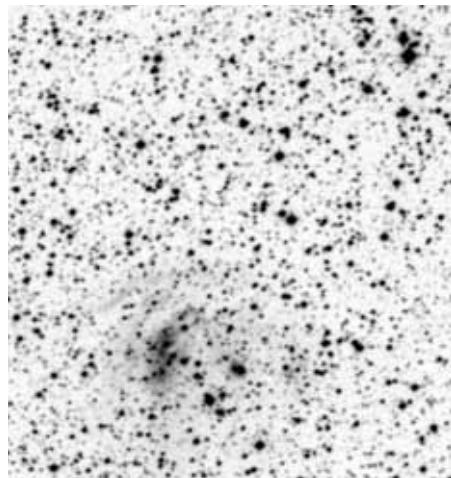
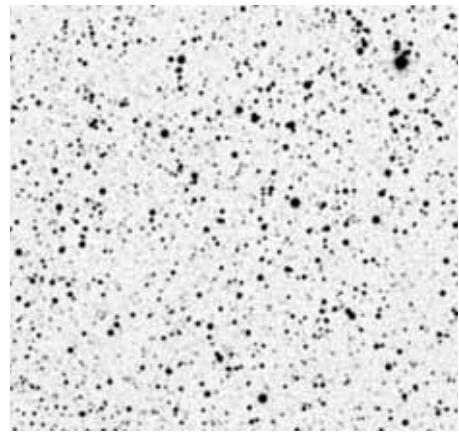
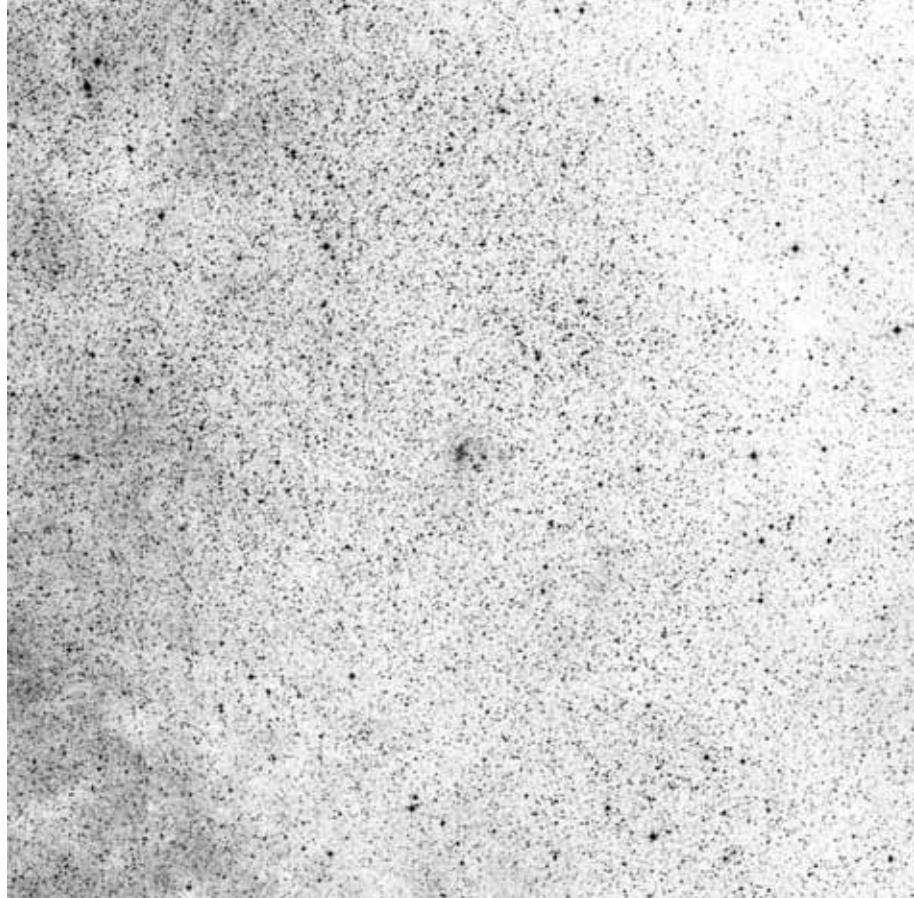
Part of the S15-S20 complex of HII regions.

Observing notes:



Sh 2 - 21

in Sagittarius

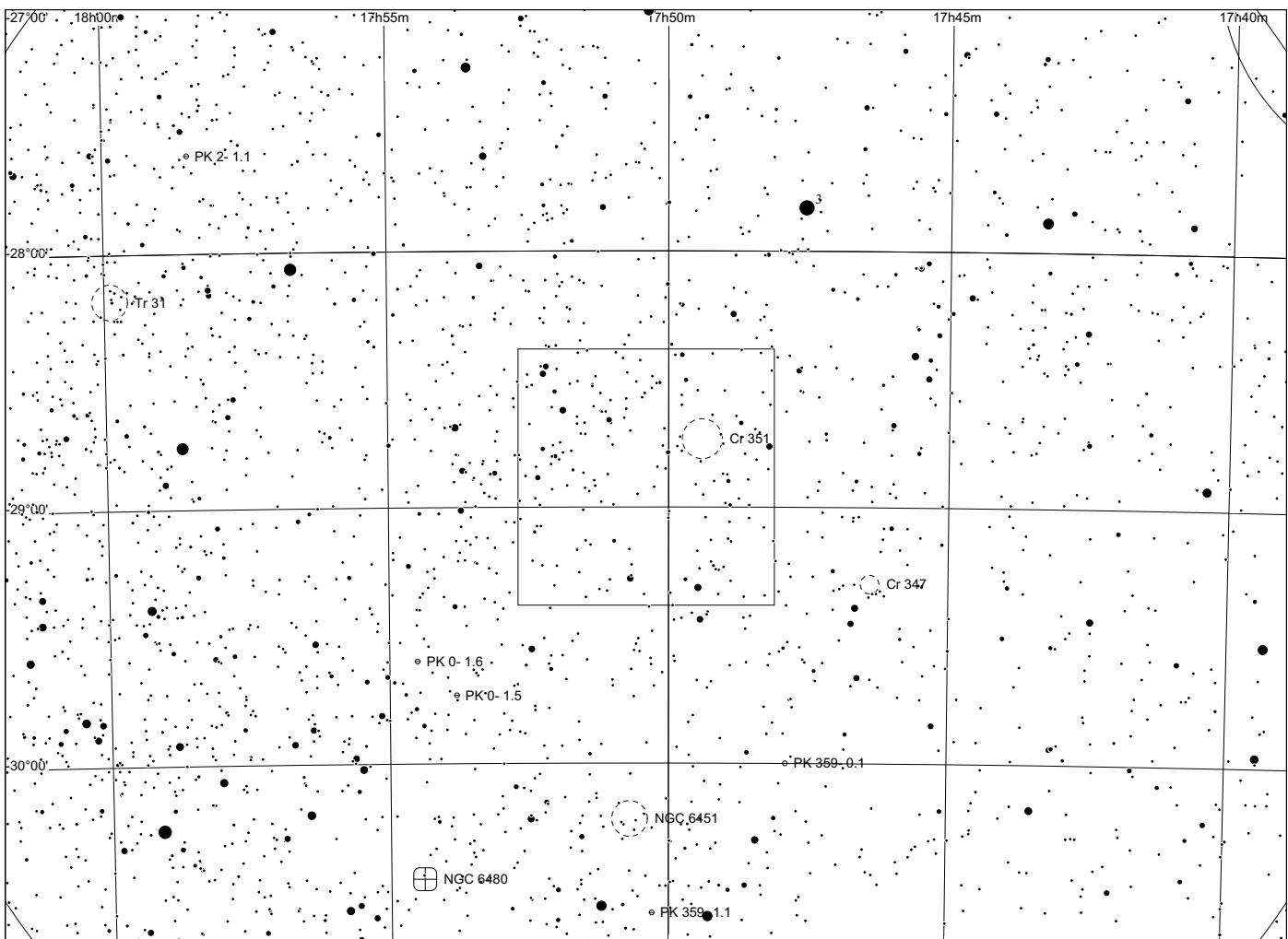
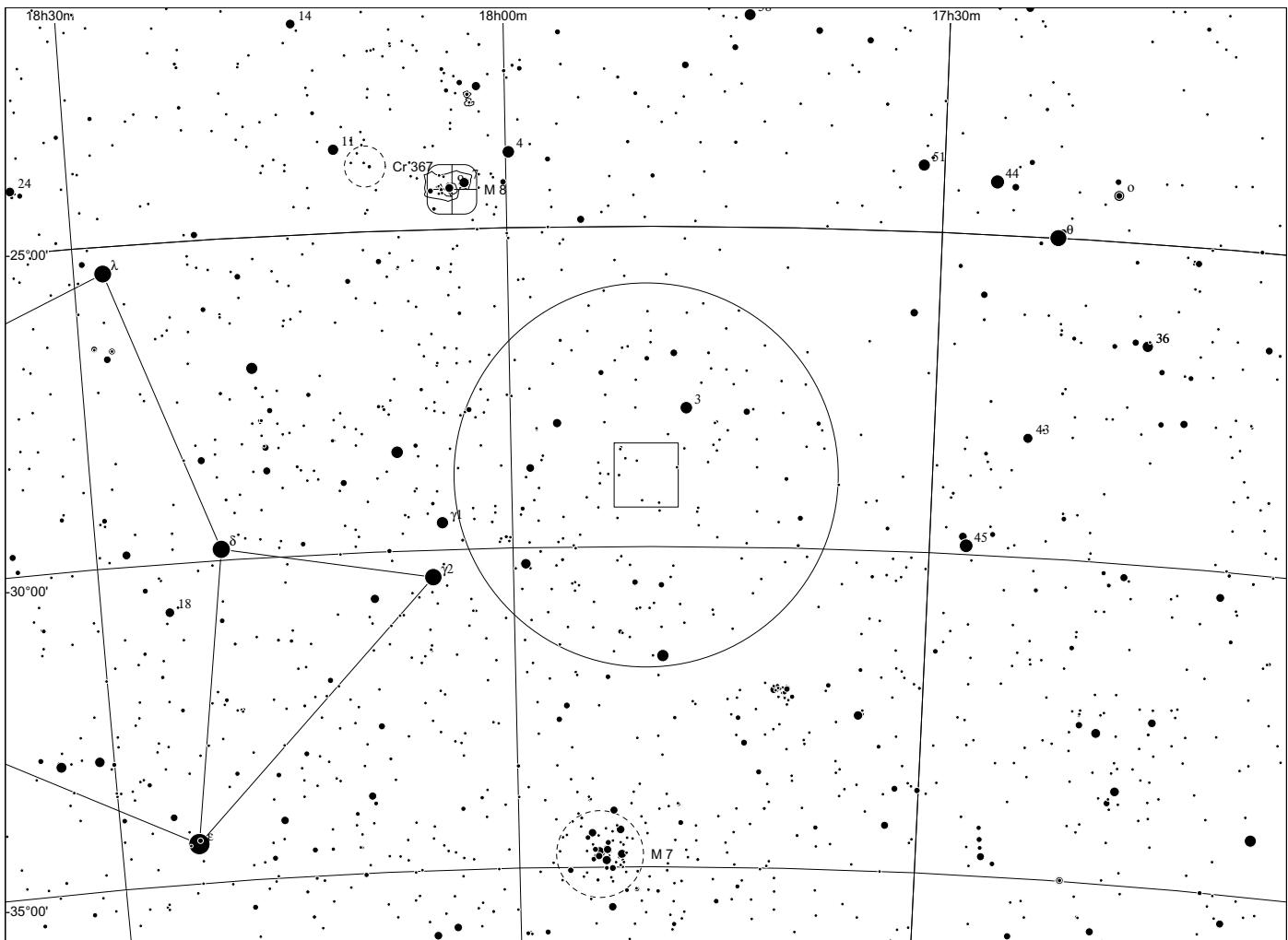


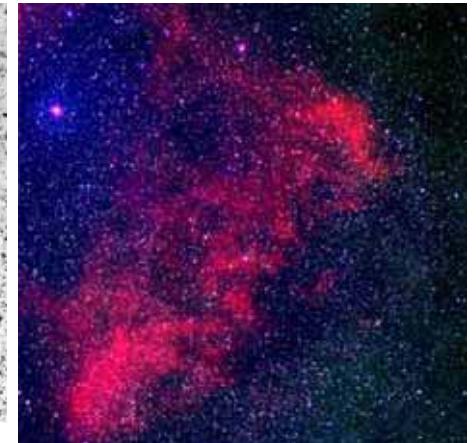
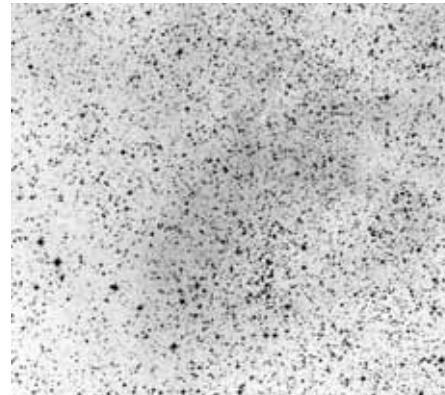
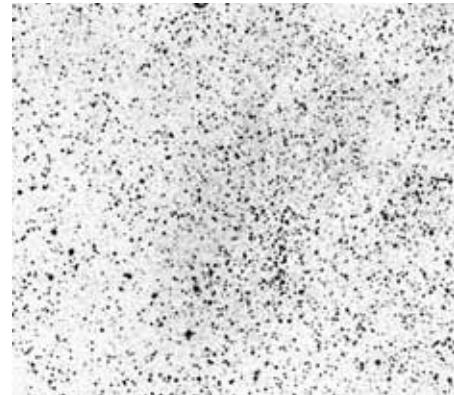
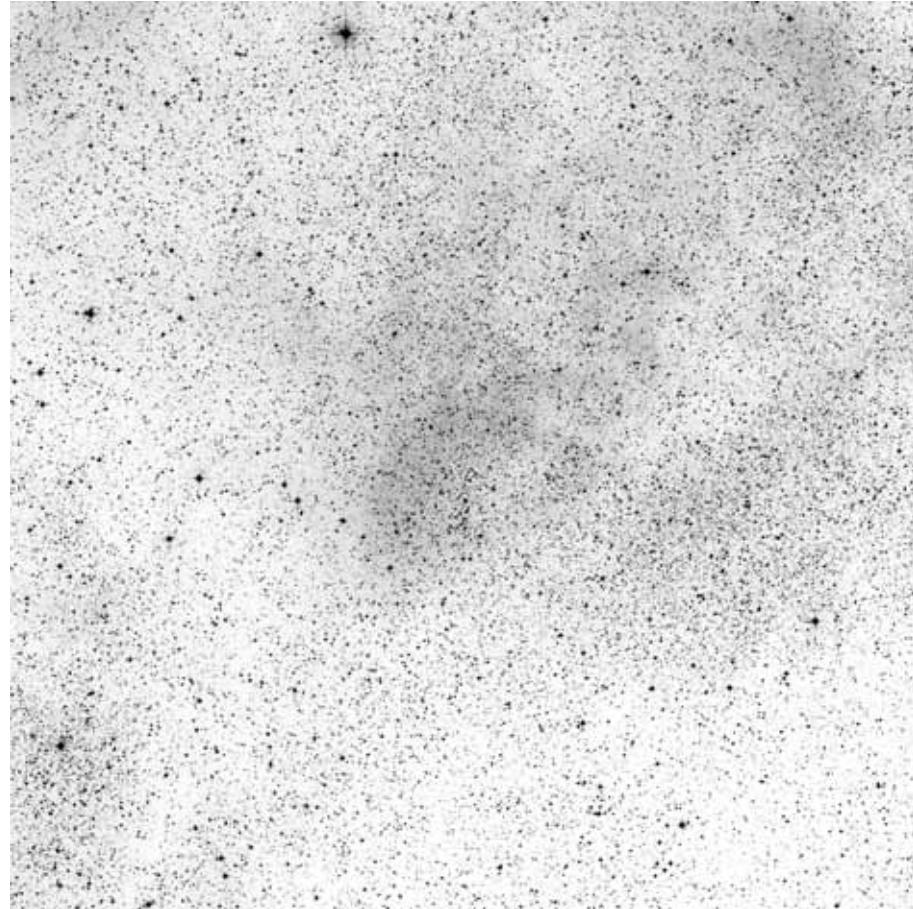
	other name	RA	dec	dia. '	F	S	B
Sh 2-021		17 51 38.6	-28 53 40	5	3	2	2

Distance: 8000 pc, Size: 11.6 pc, Source: [2003A&A...397..133R](#)

This HII region is located near the galactic nucleus and is associated with a giant molecular cloud and two star clusters.

Observing notes:



Sh 2 - 22**in Sagittarius**

POSS blue

POSS red

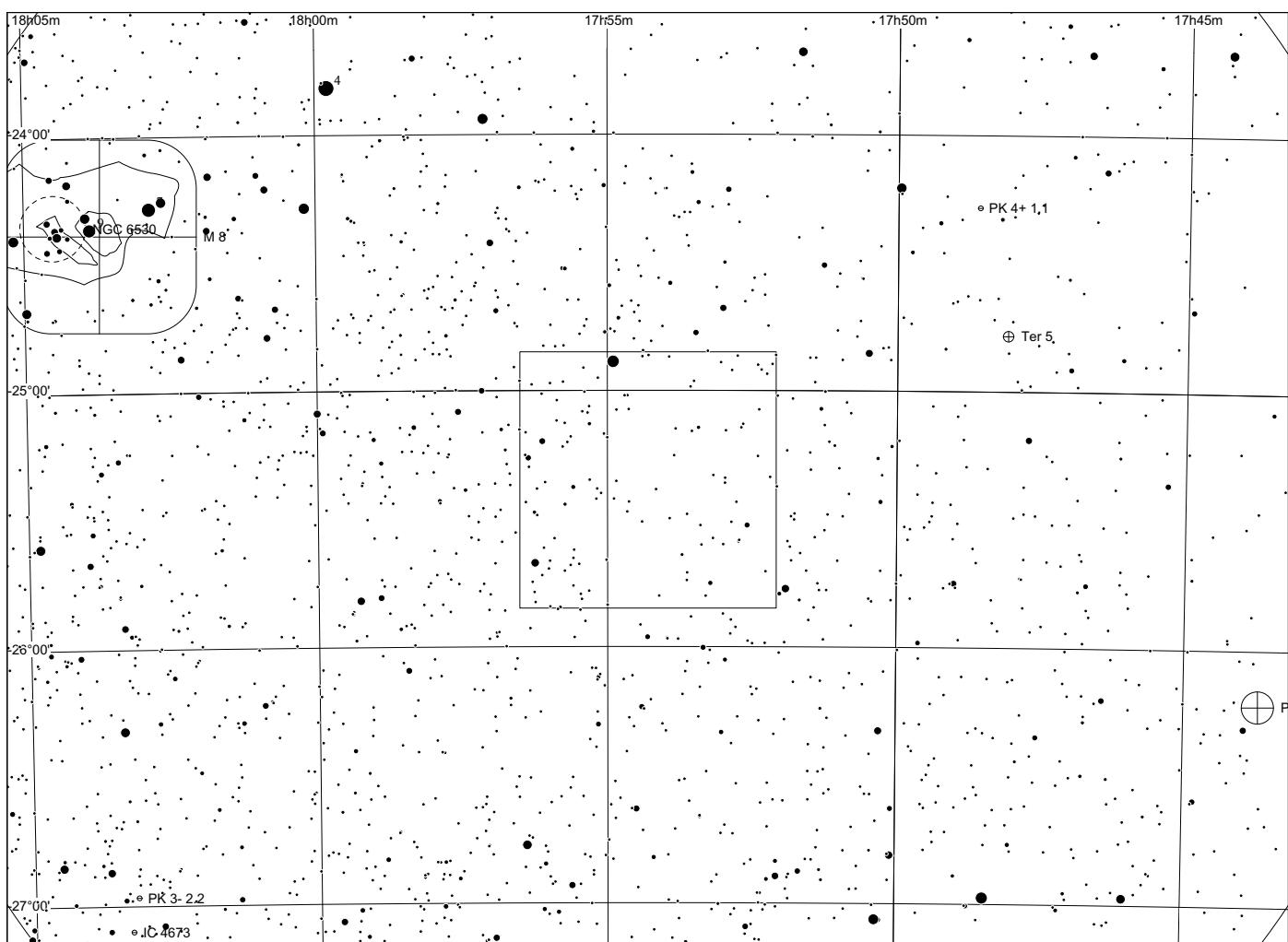
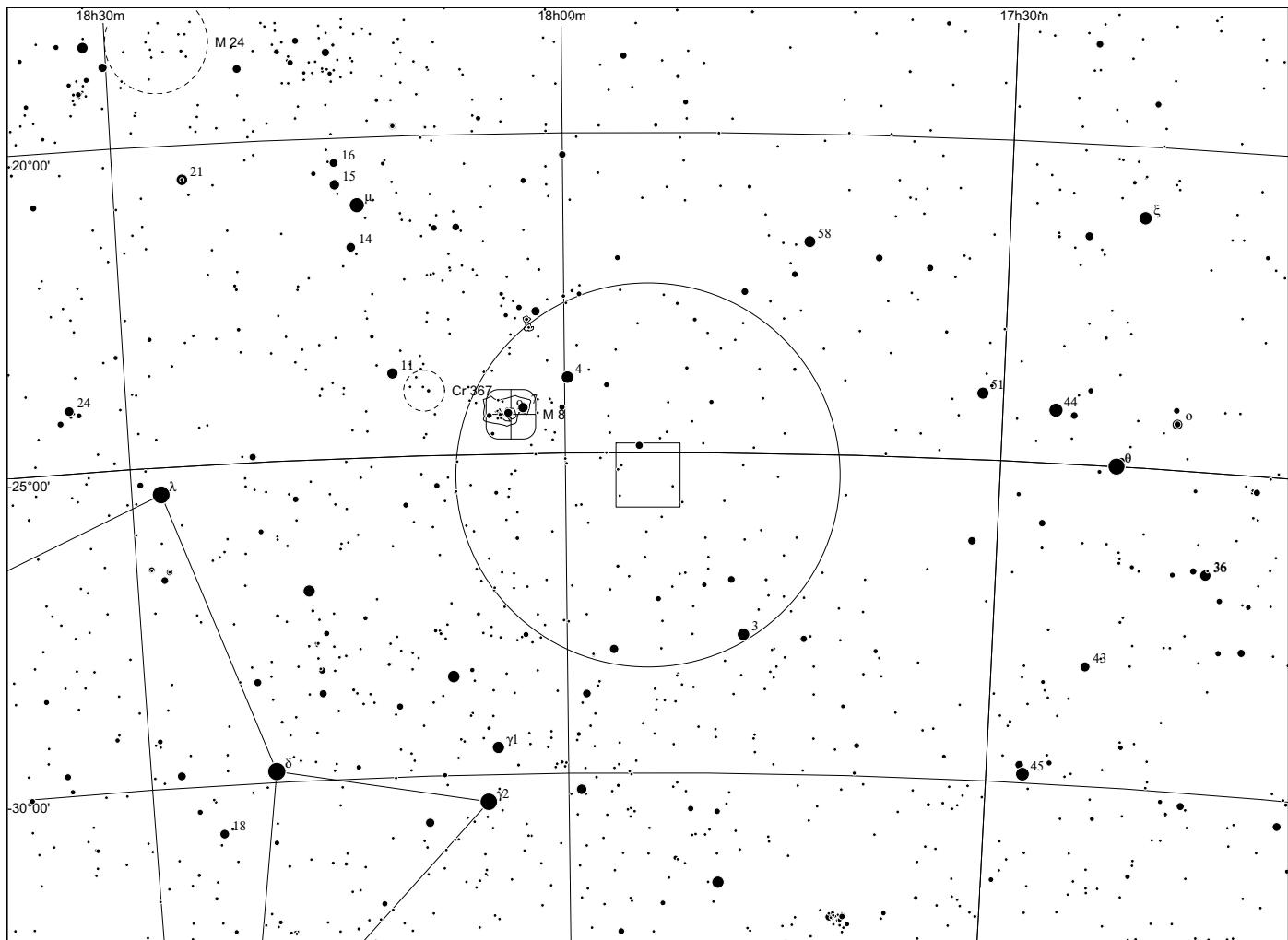
composite

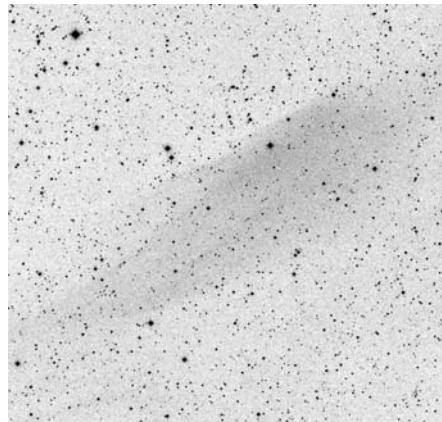
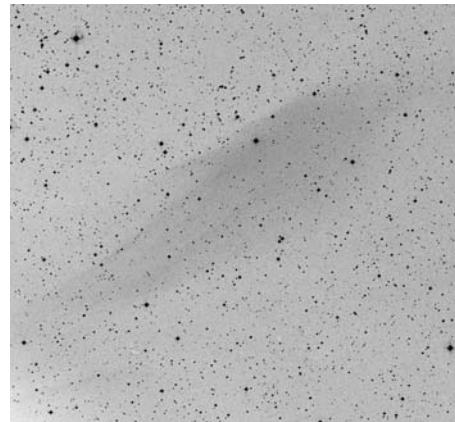
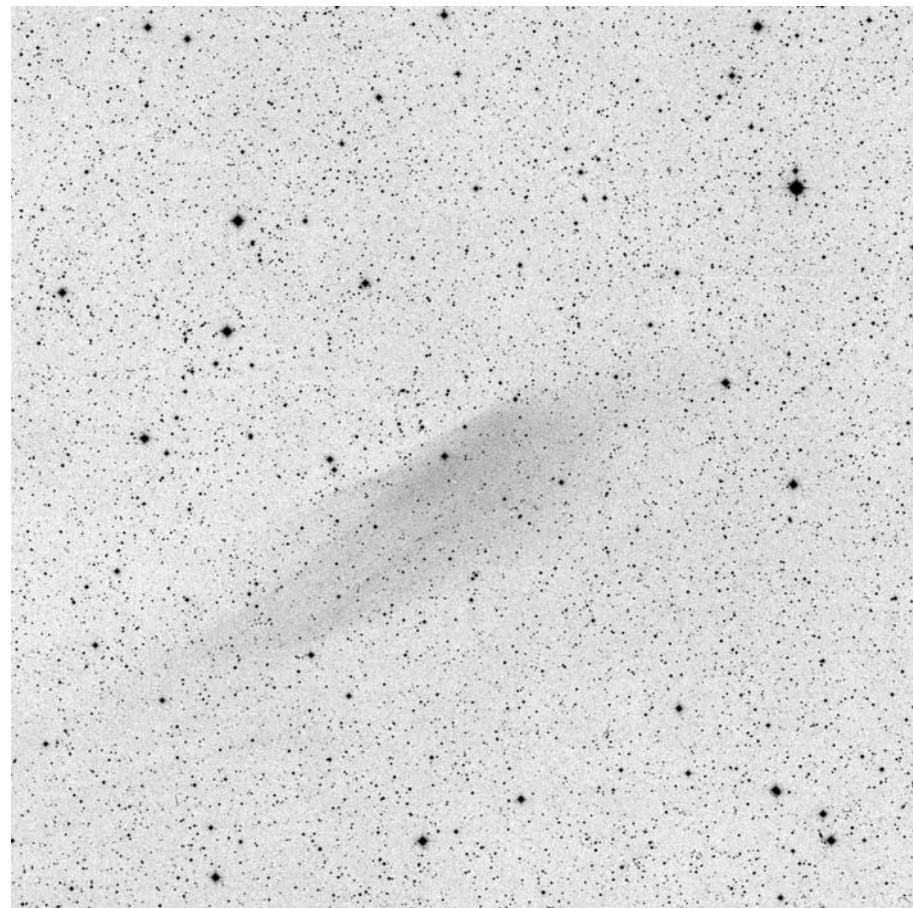
	other name	RA	dec	dia. '	F	S	B
Sh 2-022		17 55 02.9	-25 02 10	60	3	2	2

Distance: 1200 pc, Size: 20.9 pc, Source: 1982ApJS...49..183B

This is a ring nebula surrounding the O-star HD 162978.

Observing notes:



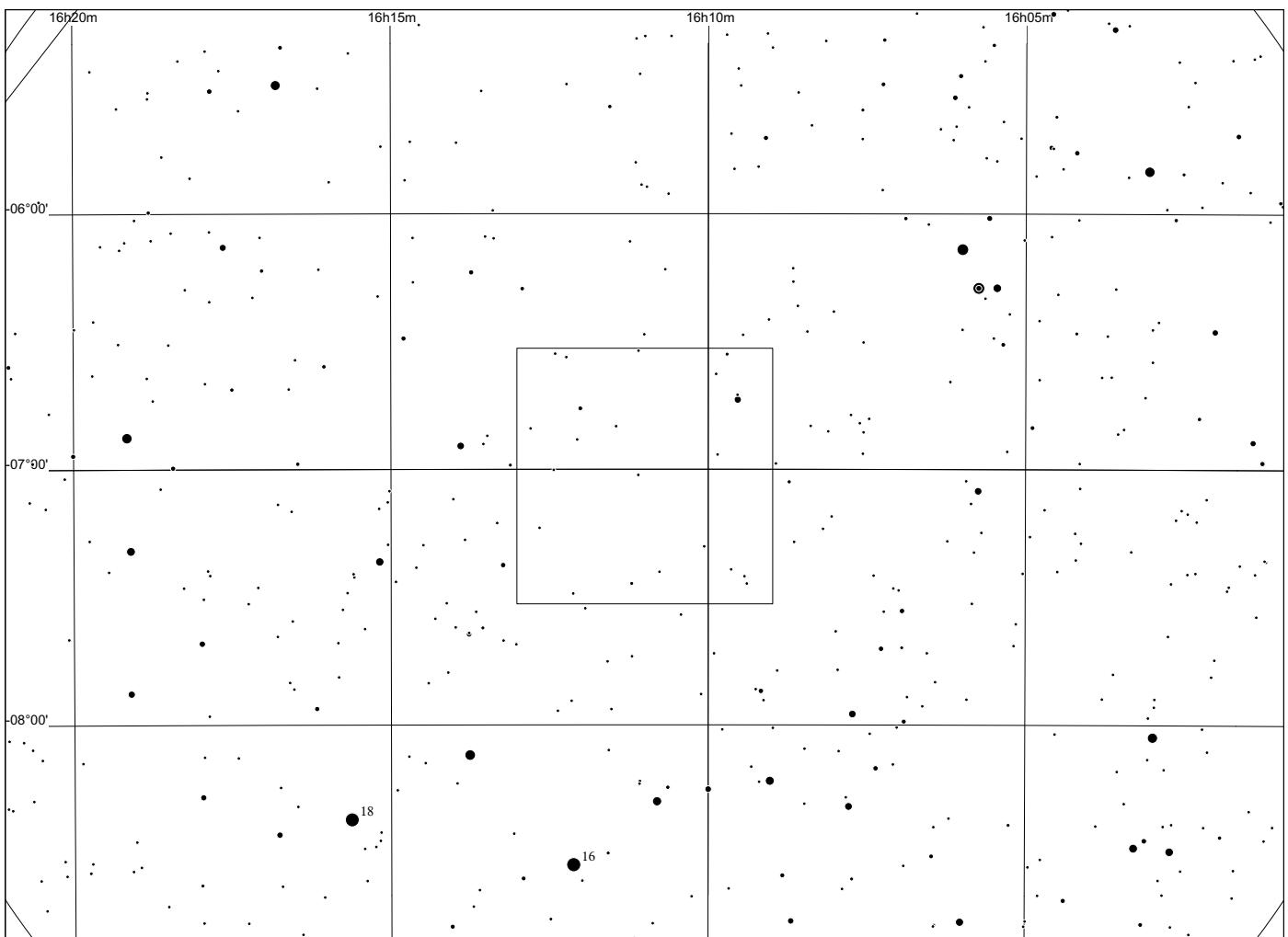
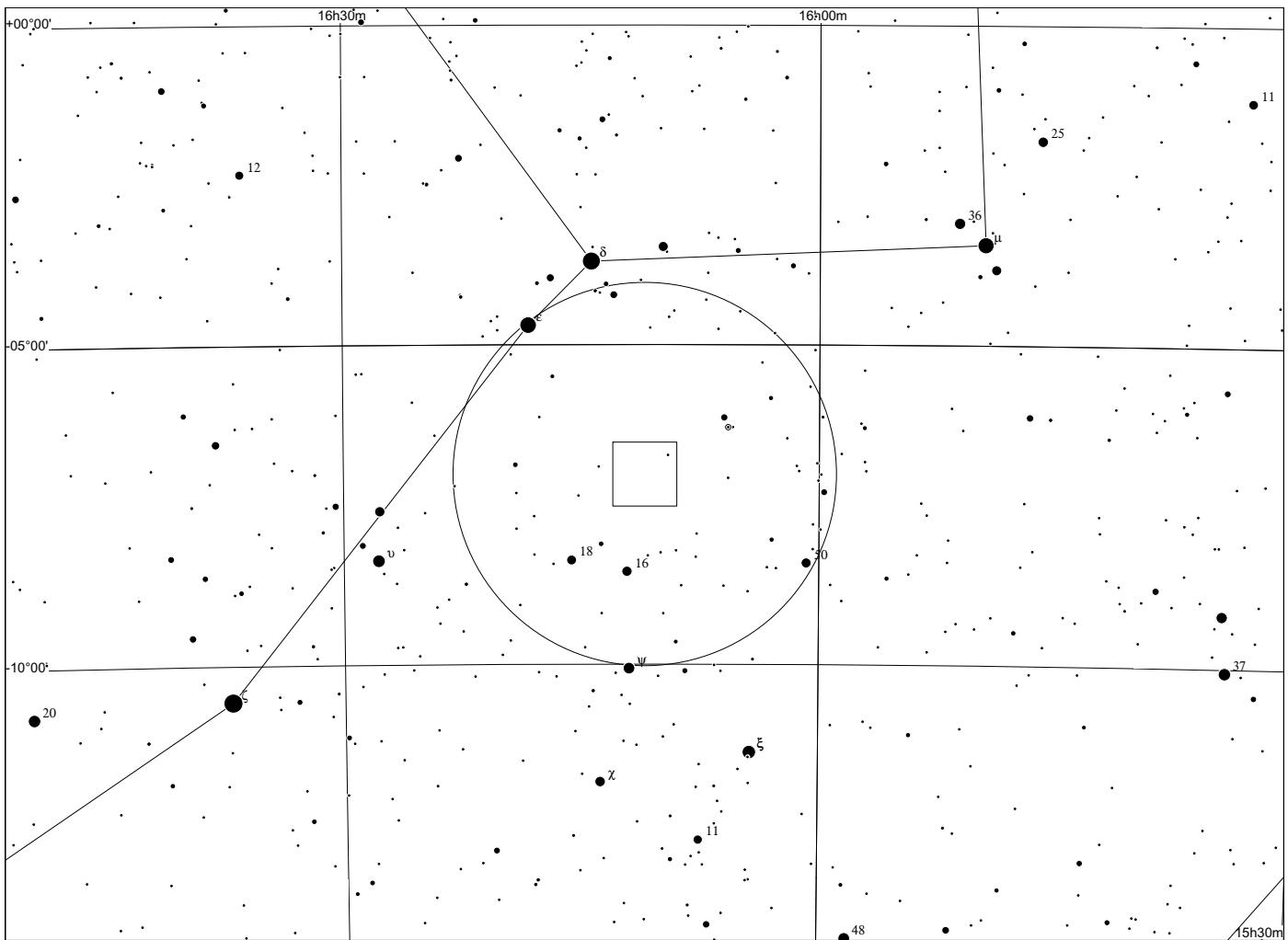
Sh 2 - 24**in Ophiuchus**

	other name	RA	dec	dia. '	F	S	B
Sh 2-024		16 11 03.0	-07 04 38	30	2	1	2

Distance: 145 pc, Size: 1.3 pc, Source: [1993ApJS...88..433P](#)

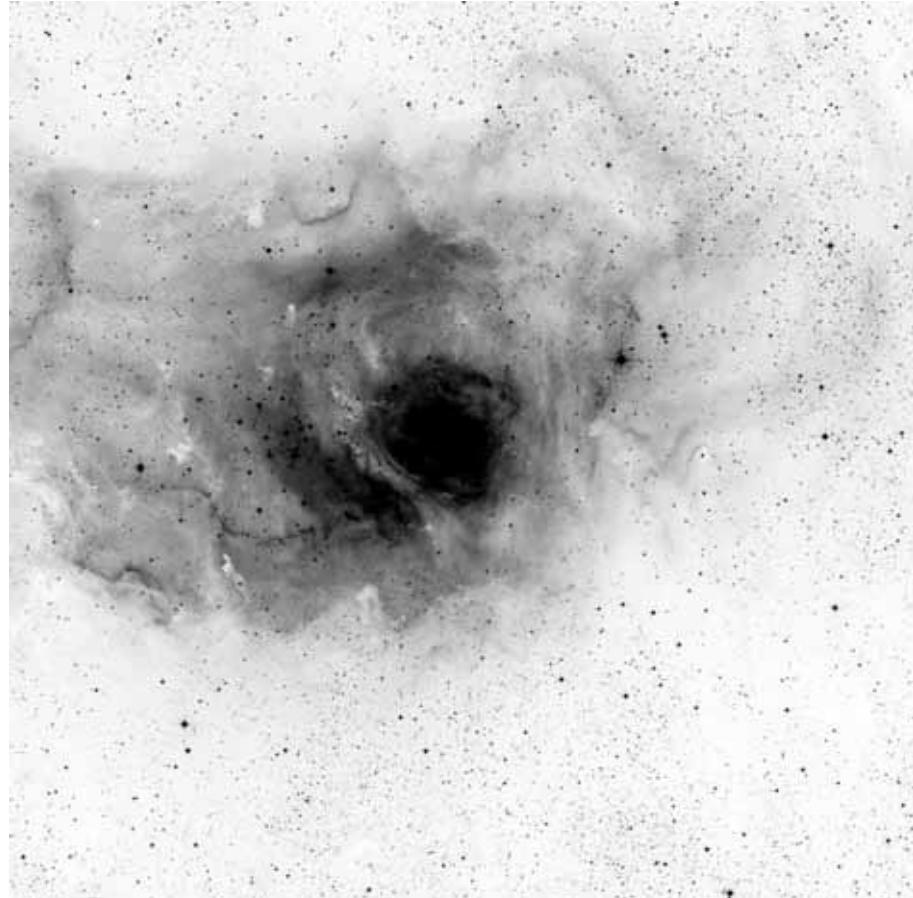
The eerie blue glow of MBM 57 is at a distance stretching between 50 and 240 pc, making it one of the closest known molecular clouds.

Observing notes:

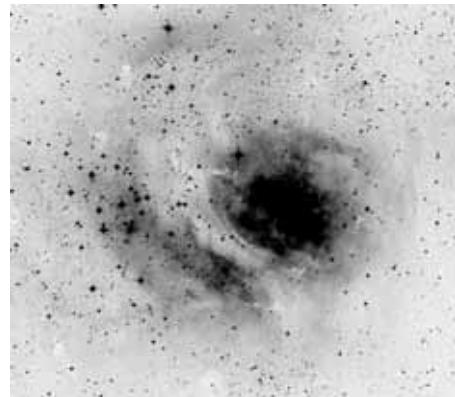


Sh 2 - 25

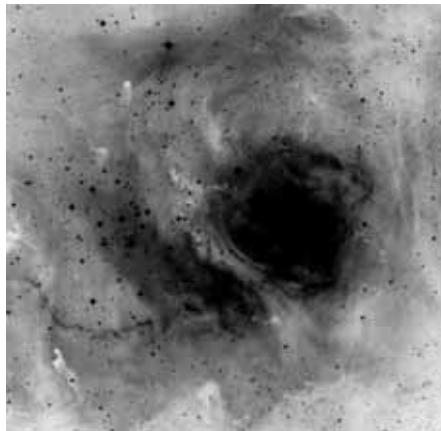
in Sagittarius



60x60, red



POSS blue



POSS red



composite

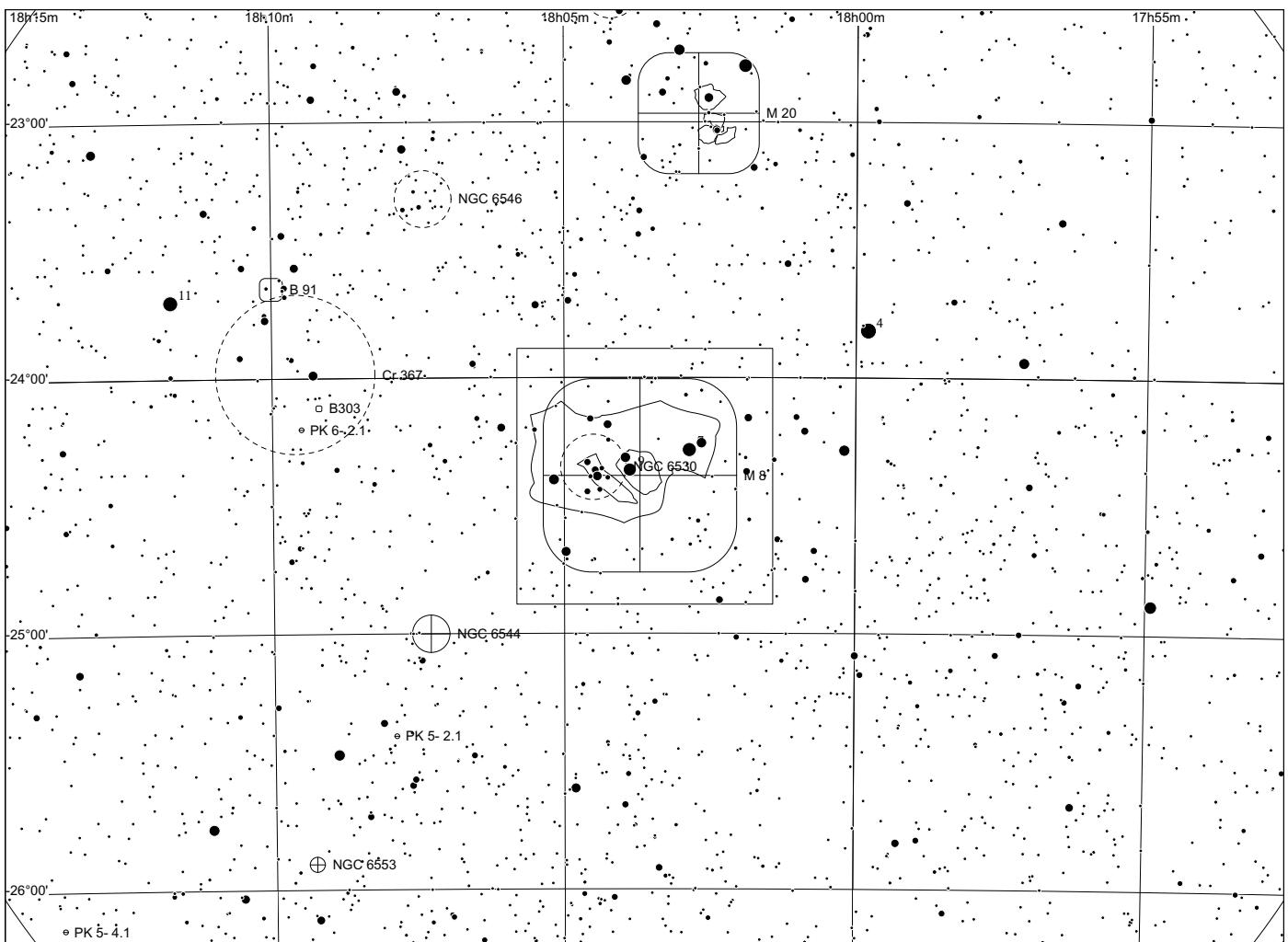
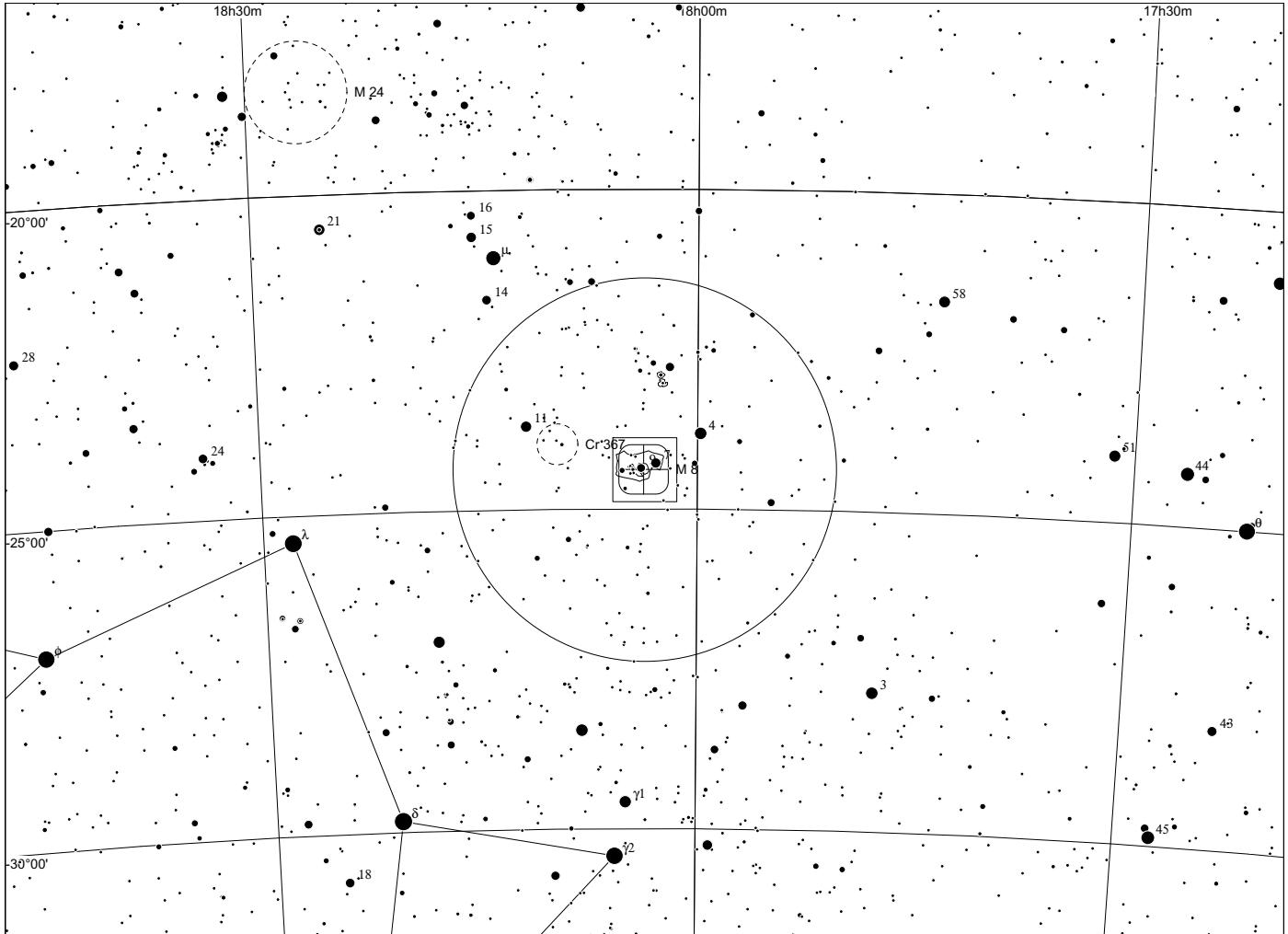
	other name	RA	dec	dia. '	F	S	B
Sh 2-025	M8 = Lagoon	18 05 25.0	-24 23 39	90	3	3	3

Distance: 1250 pc, Size: 32.7 pc, Source: [2005A&A..430..941P](#)

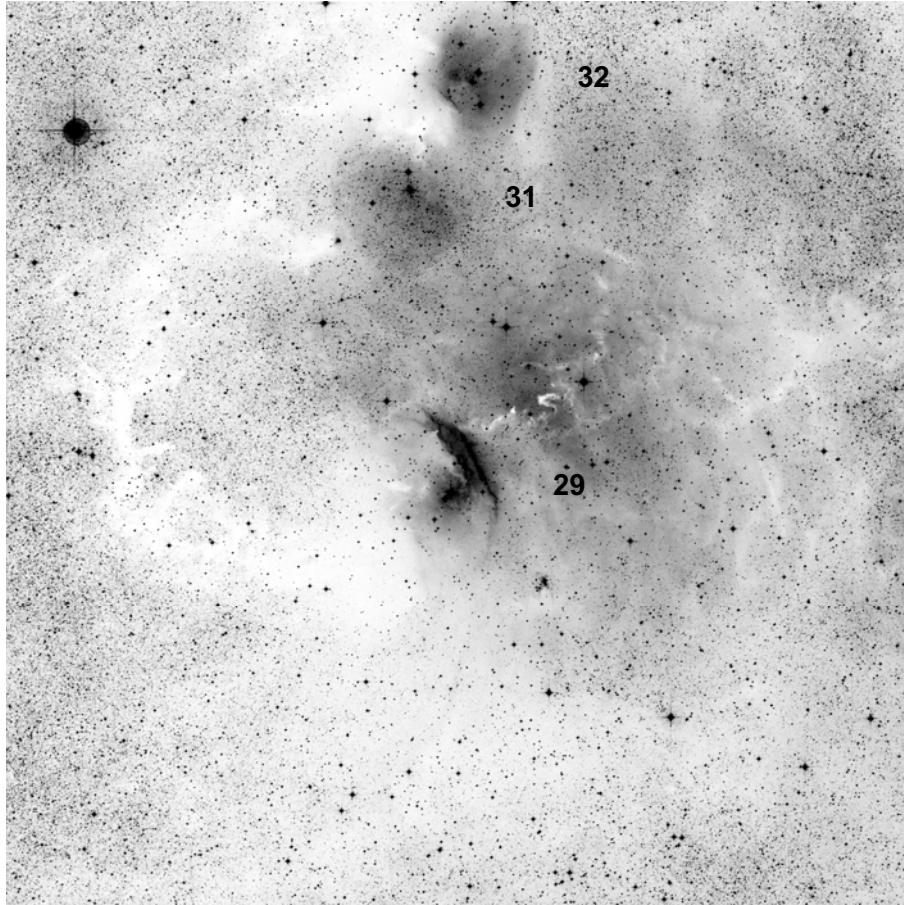
The Lagoon nebula (M8 = NGC 6523-NGC 6530) is a large HII region mainly ionized by two O-class stars, 9 Sagitarii [O4V((f))] and HD 165052 (O6.5V + O7.5V). It is embedded within a molecular cloud which extends to the star cluster NGC 6530. Within M8's core lies a distinctive bipolar nebula called the Hourglass, a blister-type HII region which has been produced by the O7.5V star Herschel 36 (Her 36).

Note that RCW 146 also includes Gum 75 (Sh 2-29, Sh 2-31, and Sh 2-32), the nebula complex next to the Lagoon nebula.

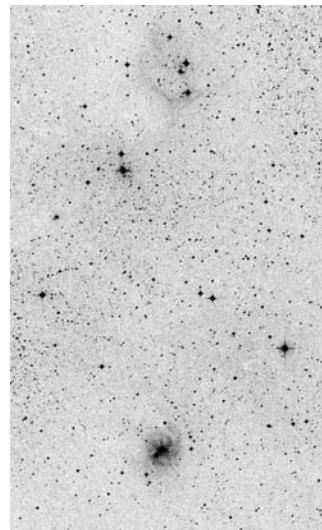
Observing notes:



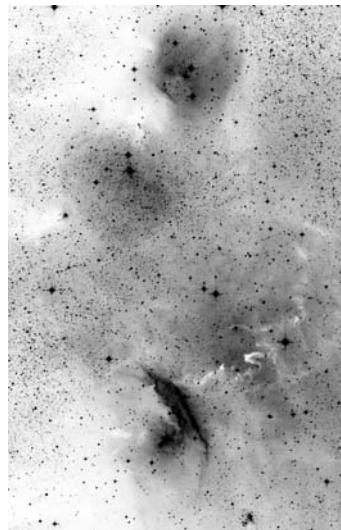
**Sh 2 - 29/31/32
in Sagittarius**



60x60, red



POSS blue



POSS red



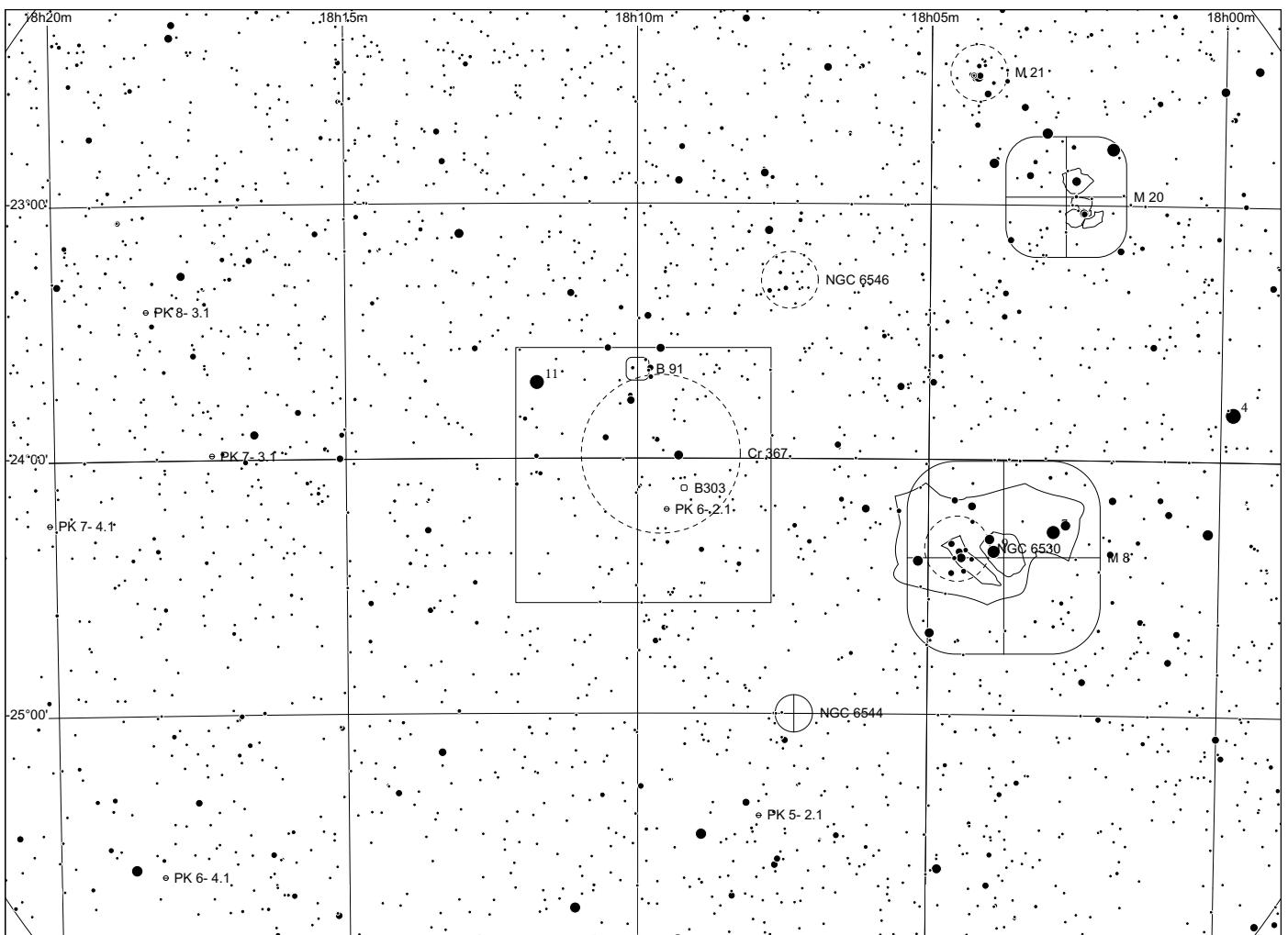
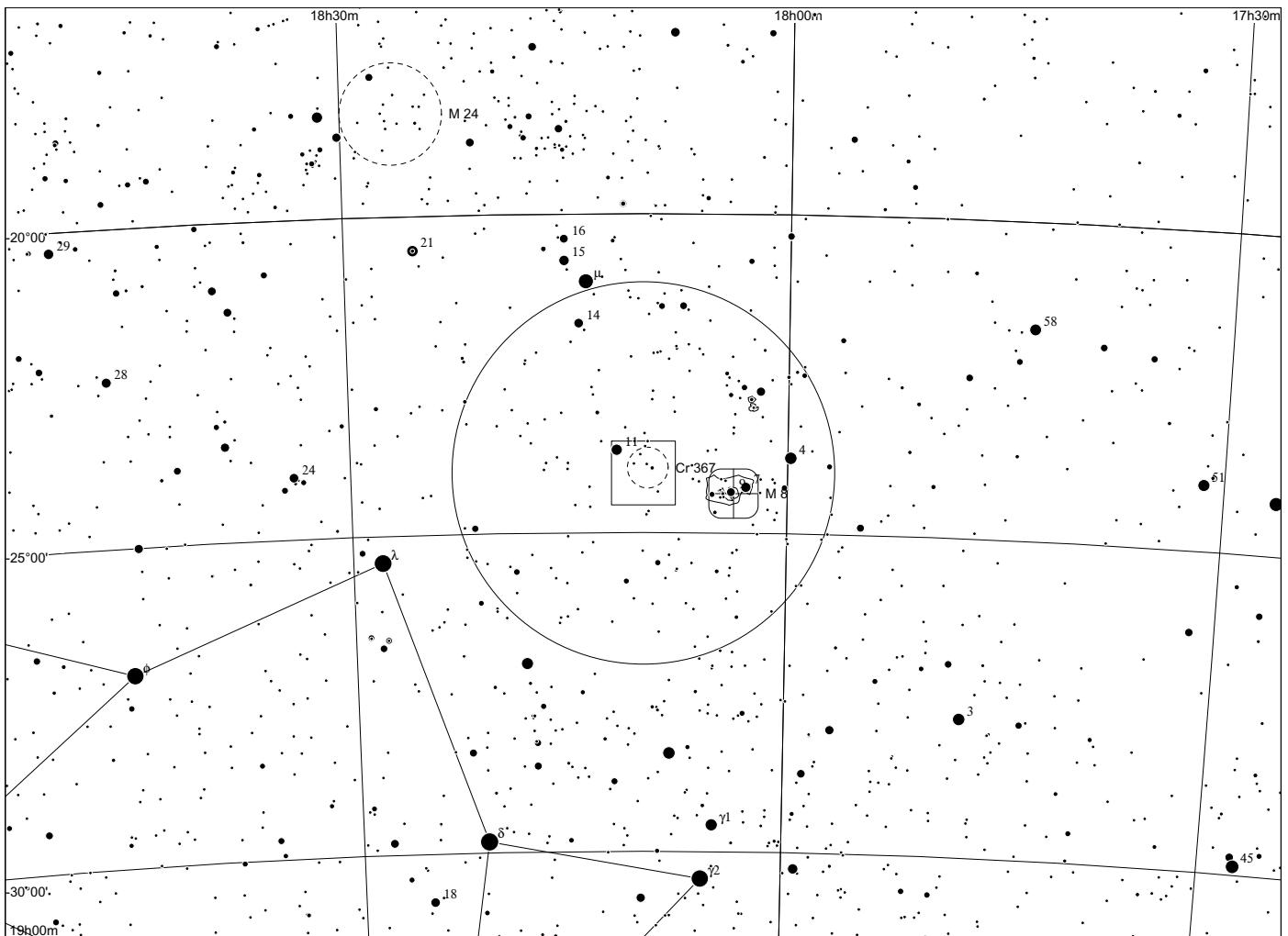
narrowband Dean Salman

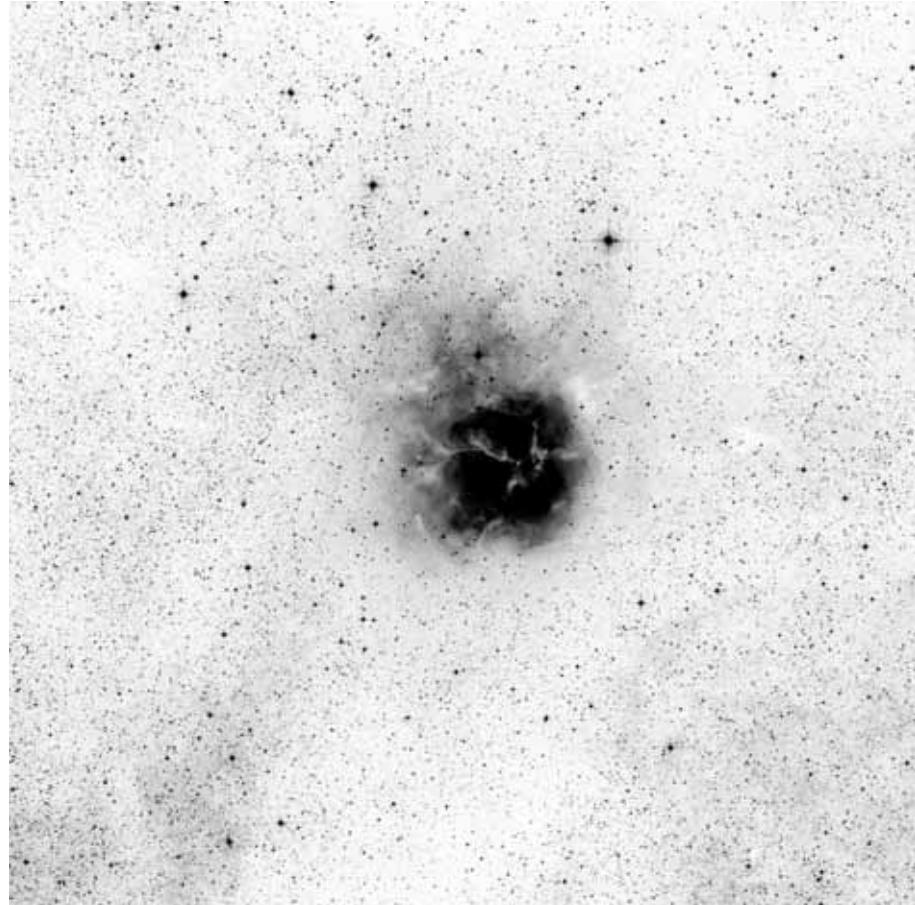
	other name	RA	dec	dia. '	F	S	B
Sh 2-029		18 10 30.5	-23 59 55	40	3	2	2
Sh 2-031	IC 1275	18 11 18.2	-23 47 48	8	1	1	2
Sh 2-032	IC 1274	18 10 53.0	-23 38 51	8	1	2	2

Distance: 1300 pc, Size: 15.1 pc, Source: [1982ApJS...49..183B](#)

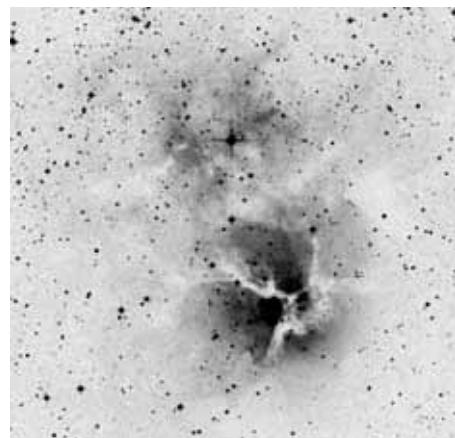
In 2003, an infrared cluster was reported in NGC 6559, which is part of Sh 2-29. Sh 2-29, Sh 2-31, and Sh 2-32 all appear to be part of the same nebula complex although the associated CO velocities suggest that these objects may have quite different distances.

Observing notes:

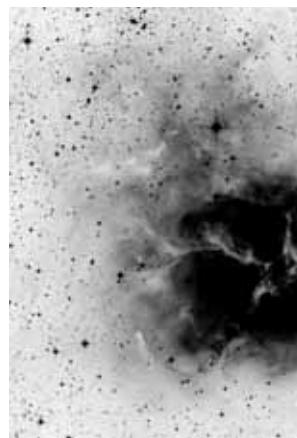


Sh 2 - 30**in Sagittarius**

60x60, red



POSS blue



POSS red



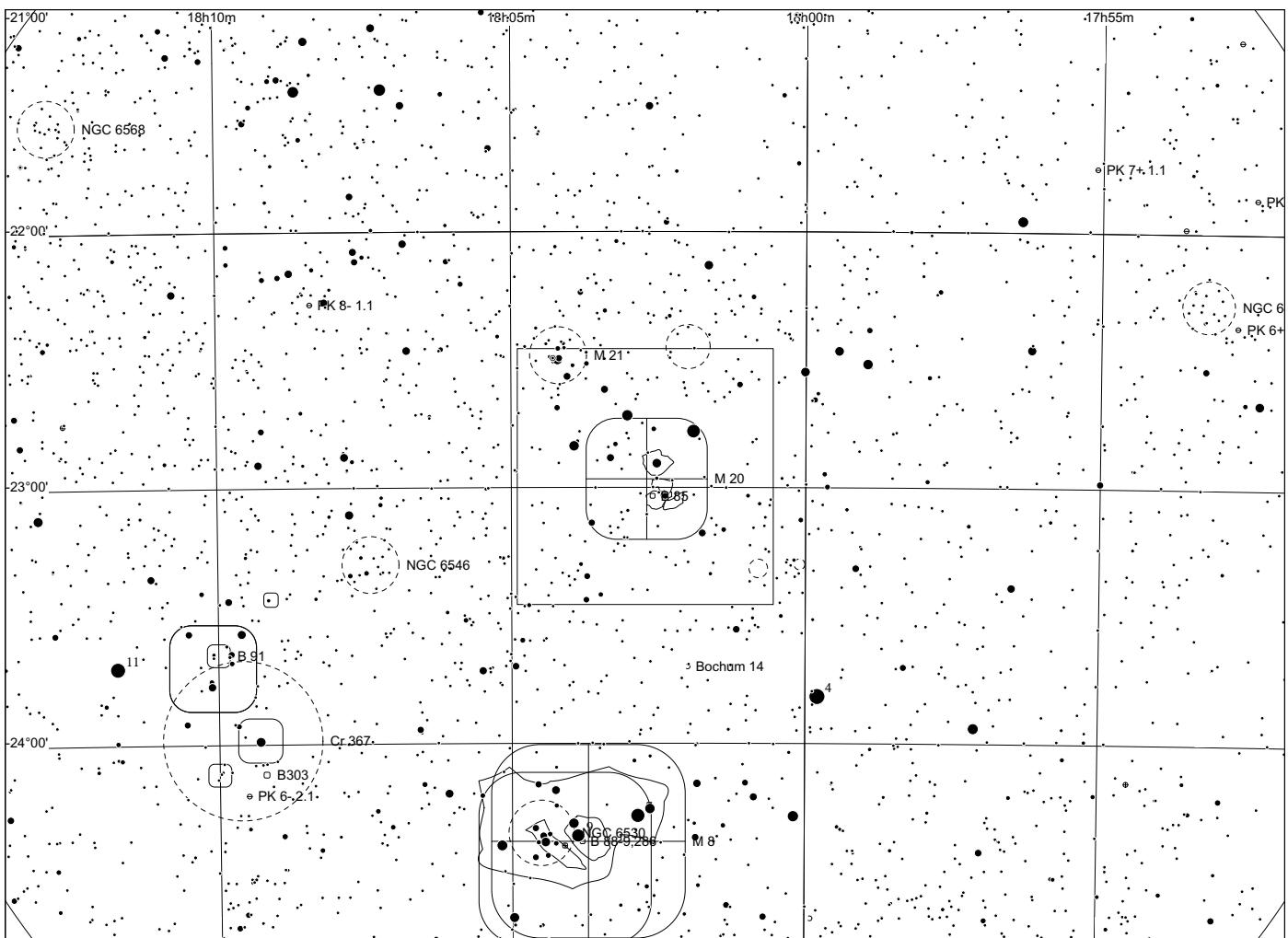
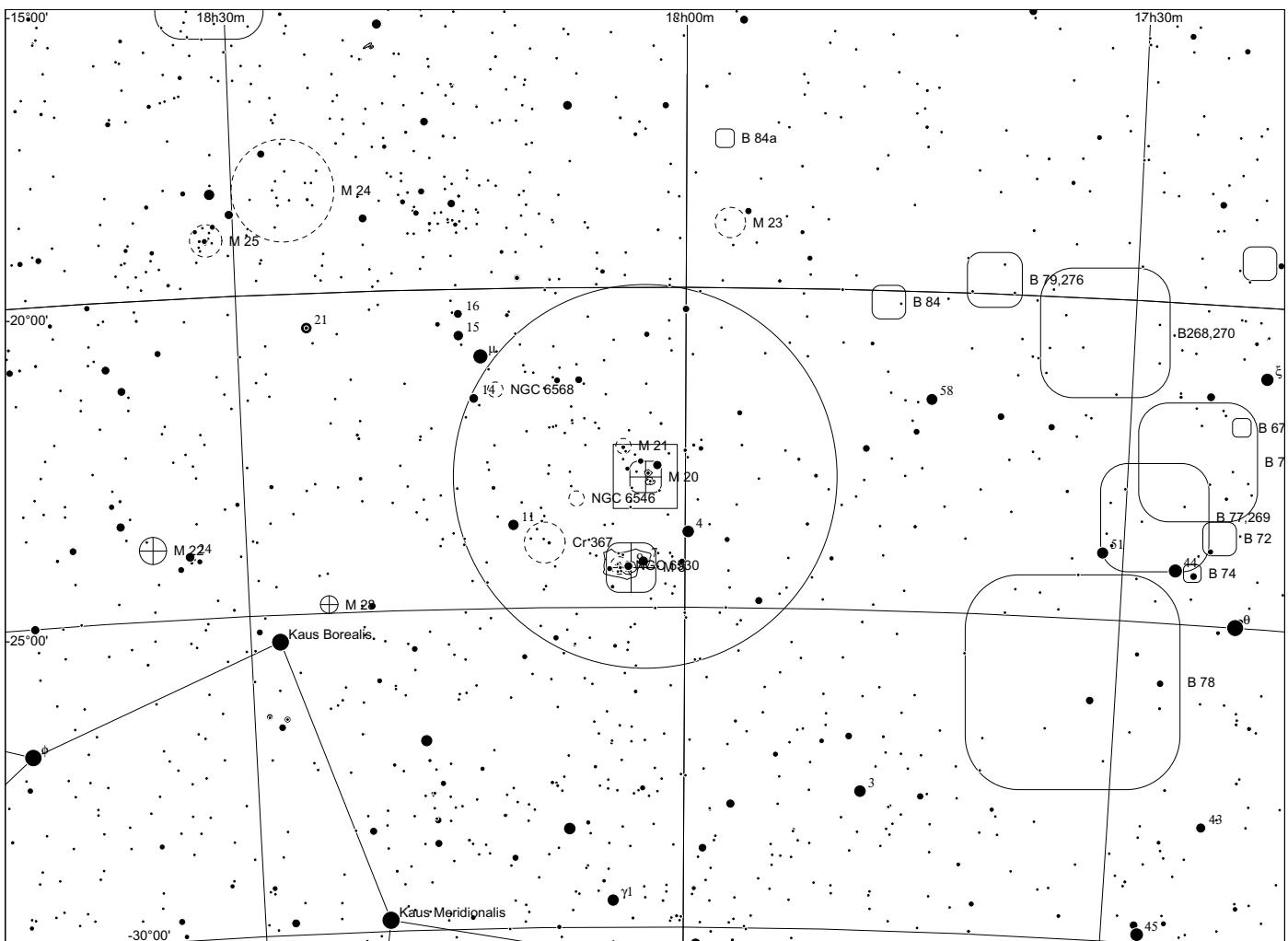
composite

	other name	RA	dec	dia. '	F	S	B
Sh 2-030	M20 = Trifid	18 03 34.1	-23 00 55	20	3	3	3

Distance: 3010 pc, Size: 4.9 pc, Source: [2003A&A...397..213P](#)

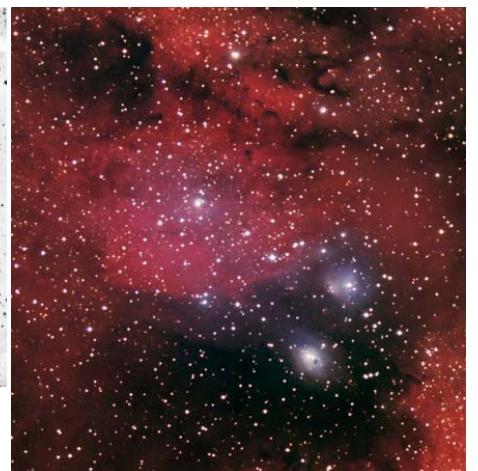
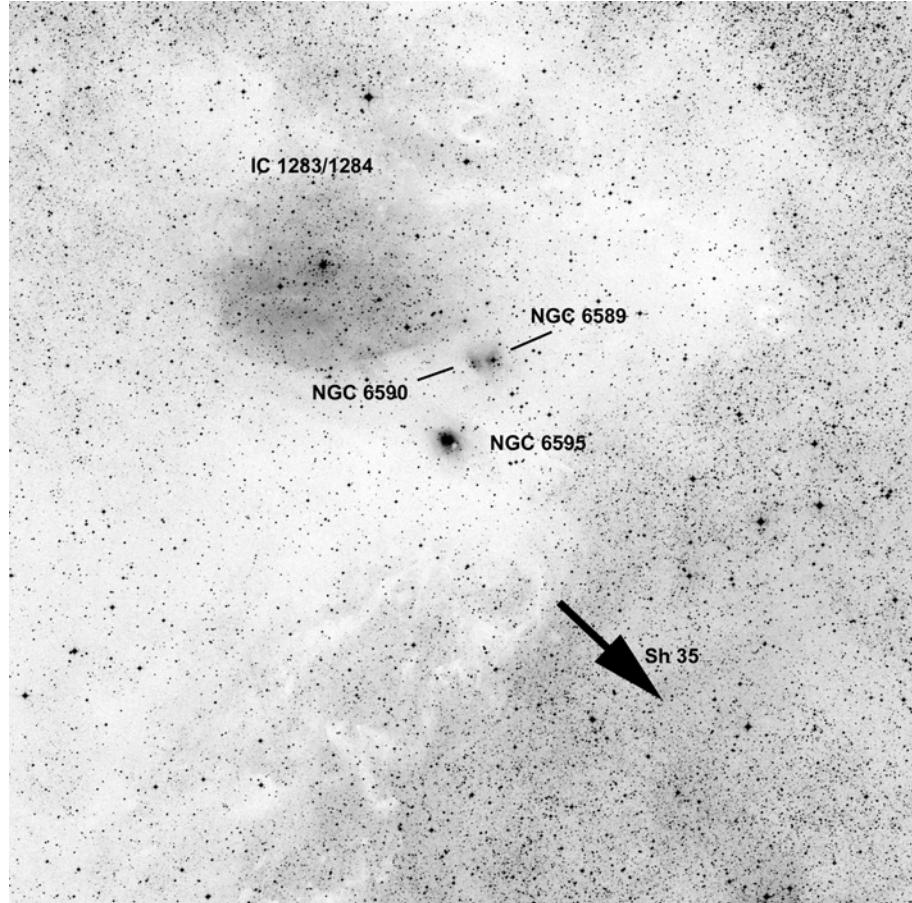
The Trifid nebula, M20, is an HII region ionised by the O7.5 star HD 164492A and is divided into three parts by dust lanes. A blue reflection nebula surrounds the HII region and also appears just to the north. It is only 300 thousand years old.

Observing notes:



Sh 2 - 37

in Sagittarius



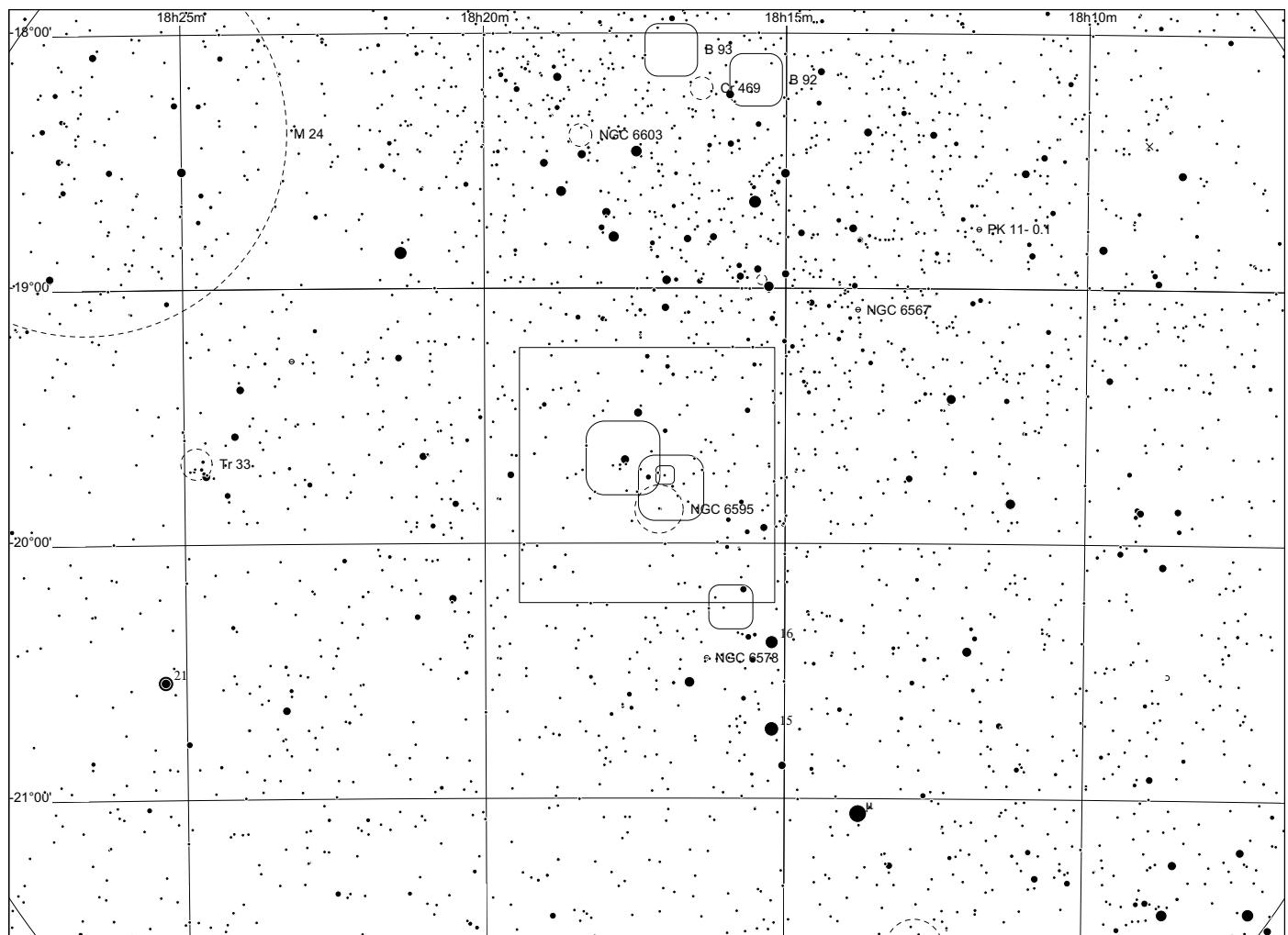
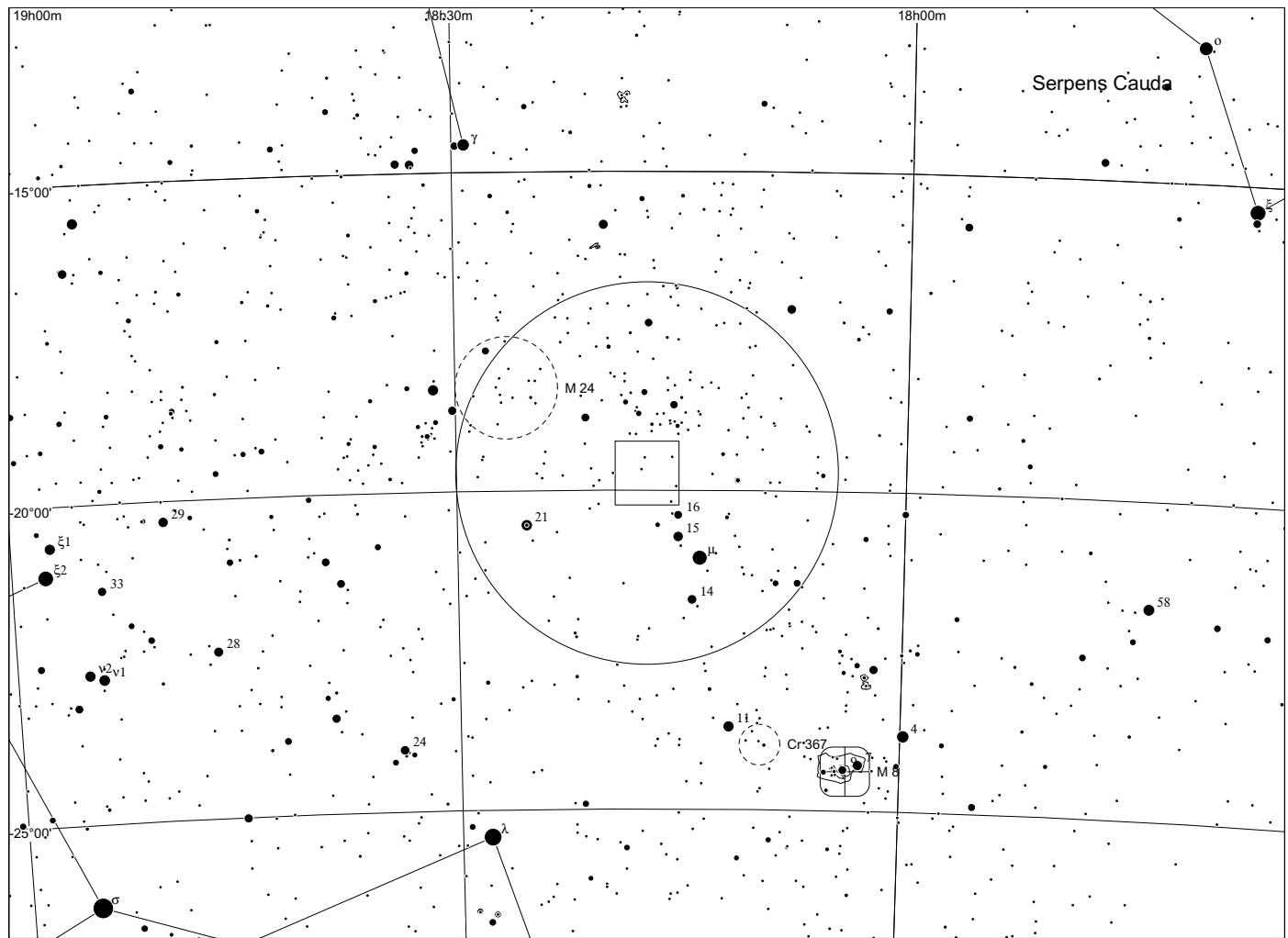
	other name	RA	dec	dia. '	F	S	B
Sh 2-037	IC 1283/1284	18 17 42.6	-19 39 51	20	3	2	2

Distance: 1800 pc, Size: 10.5 pc, Source: [1999PASJ...51..819S](#)

[Sh 2-35](#) and Sh 2-37 are associated with a 130 thousand solar mass giant molecular cloud at a distance of 1800 pc and appear to be part of the Sagittarius OB7 association. Sh 2-37 is visible through a hole in this molecular cloud. This is a very active star formation region.

Sh 2-37 is also known as IC 1283/1284 and the powerful radio source [W34](#). Sharpless notes that this HII region is associated with the bright stars HD 167722 (B5), HD 167815 (B2) and HD 313098 (B5).

Observing notes:

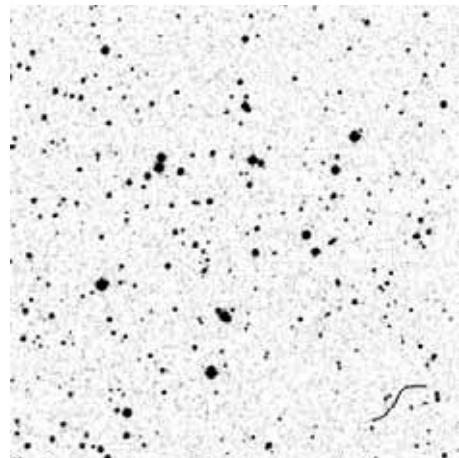


Sh 2 - 38

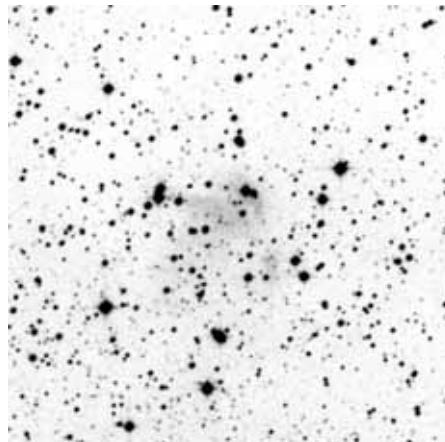
in Sagittarius



60x60, red



POSS blue



POSS red



composite

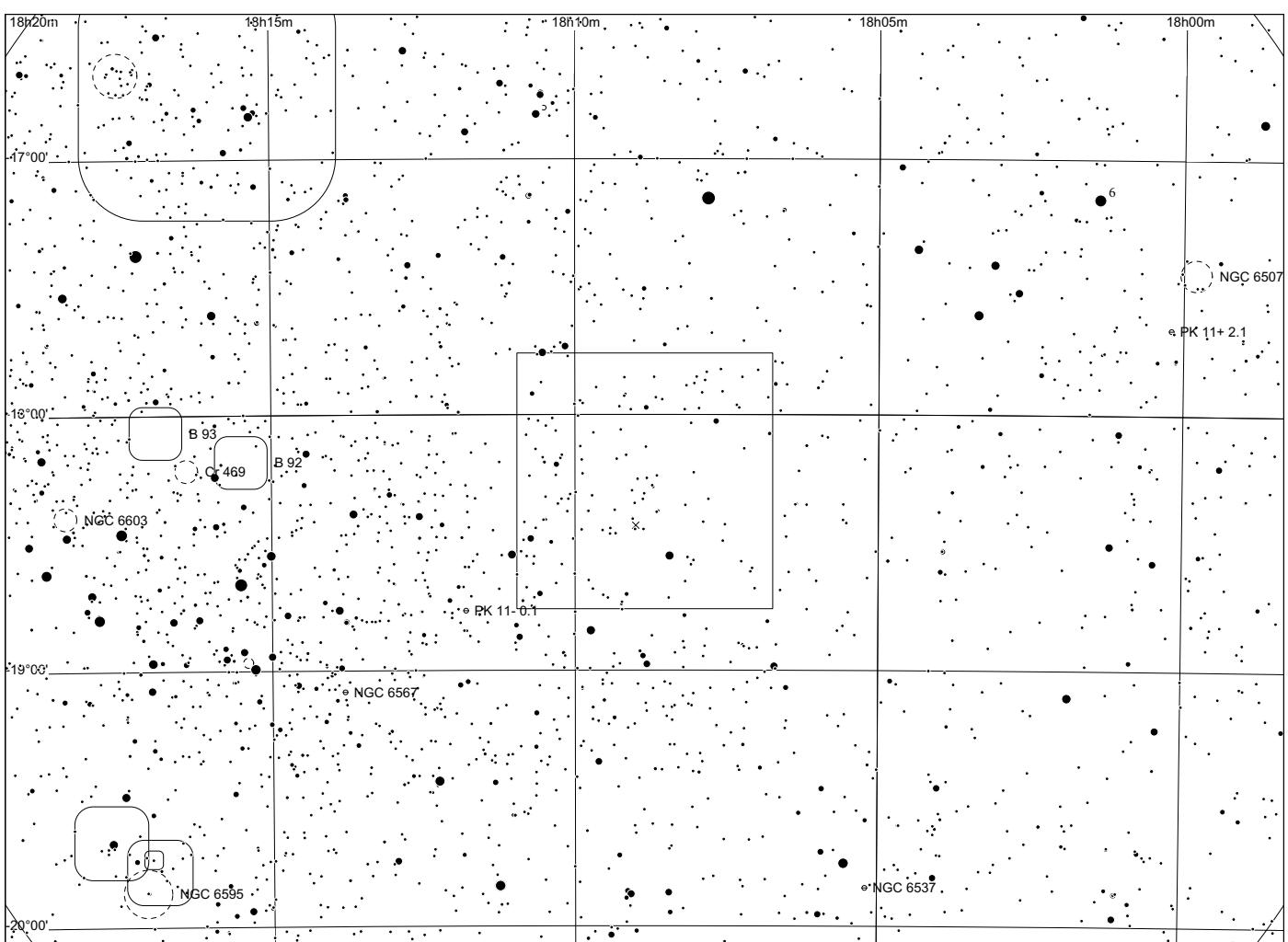
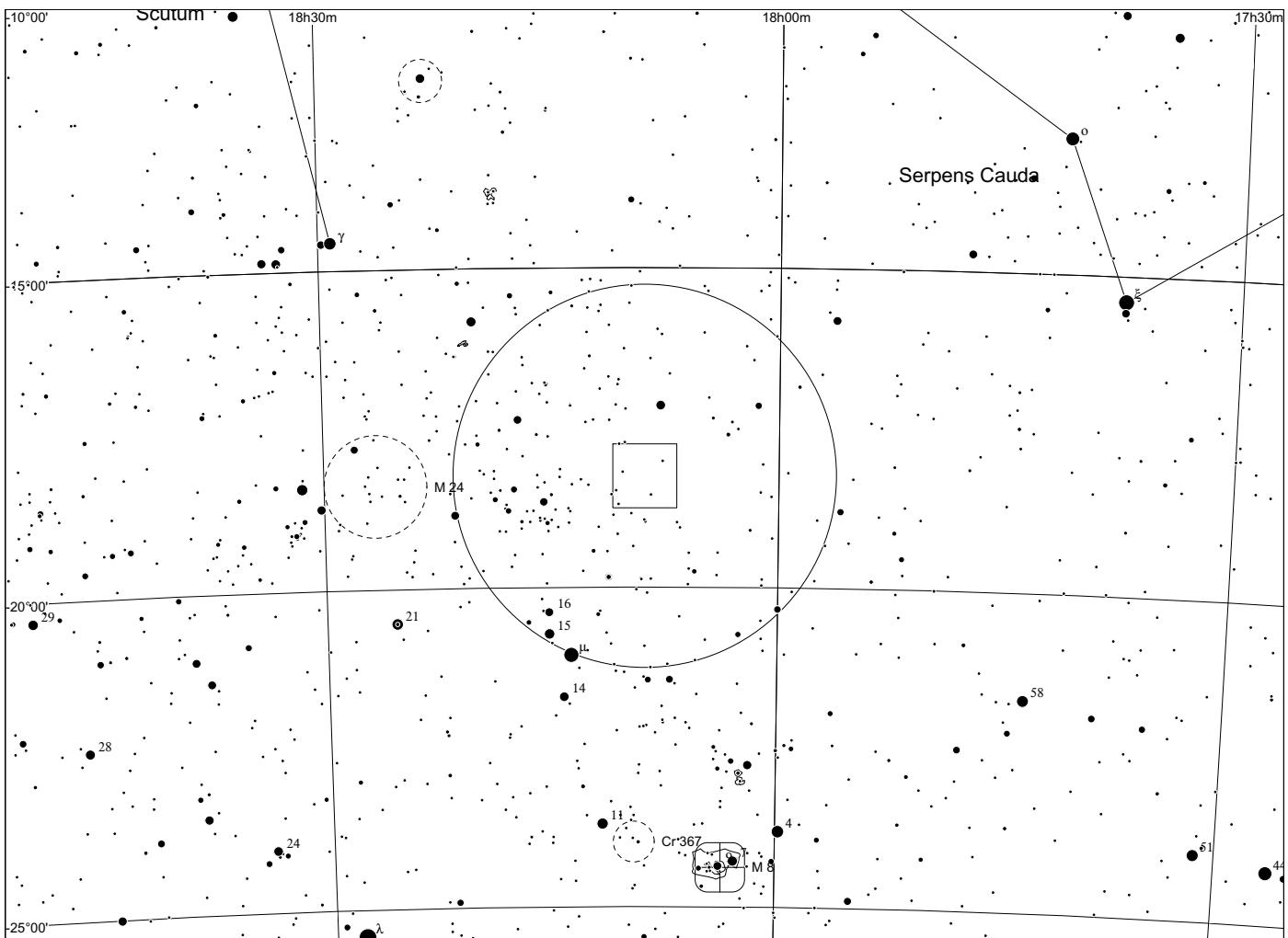
	other name	RA	dec	dia. '	F	S	B
Sh 2-038		18 08 44.8	-18 16 09	3	3	2	1

Distance: 2400 pc, Size: 2.1 pc, Source: [2003A&A...397..133R](#)

This appears to be the same as the reflection nebula VdB 114 surrounding the B8/B9Ib star HD 165811. It shows a strong (if small) image in hydrogen-alpha, however, so perhaps there is both emission and reflection in this little nebula.

Sh 2-38, Sh 2-40, Sh-41 and Sh 2-42 all appear to be embedded in the Sagittarius OB4 association.

Observing notes:

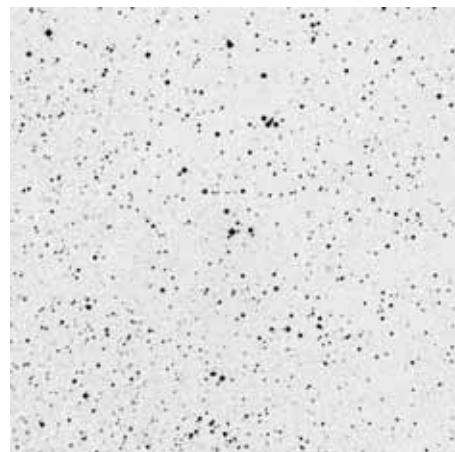


Sh 2 - 40

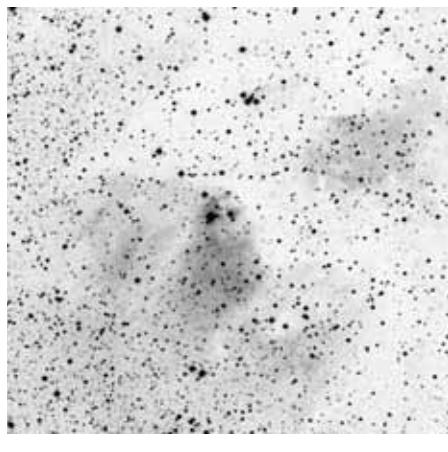
in Sagittarius



60x60, red



POSS blue



POSS red



composite

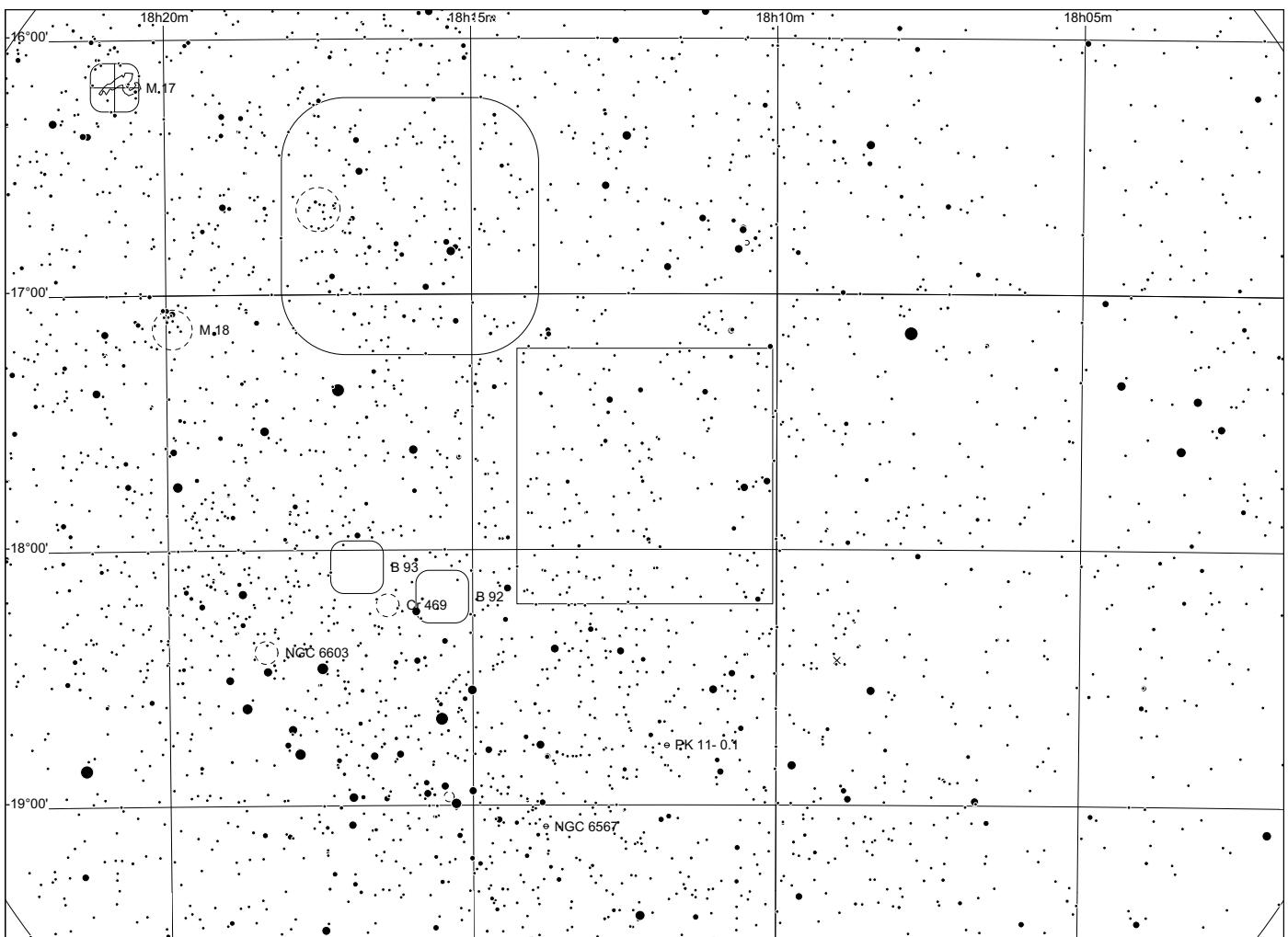
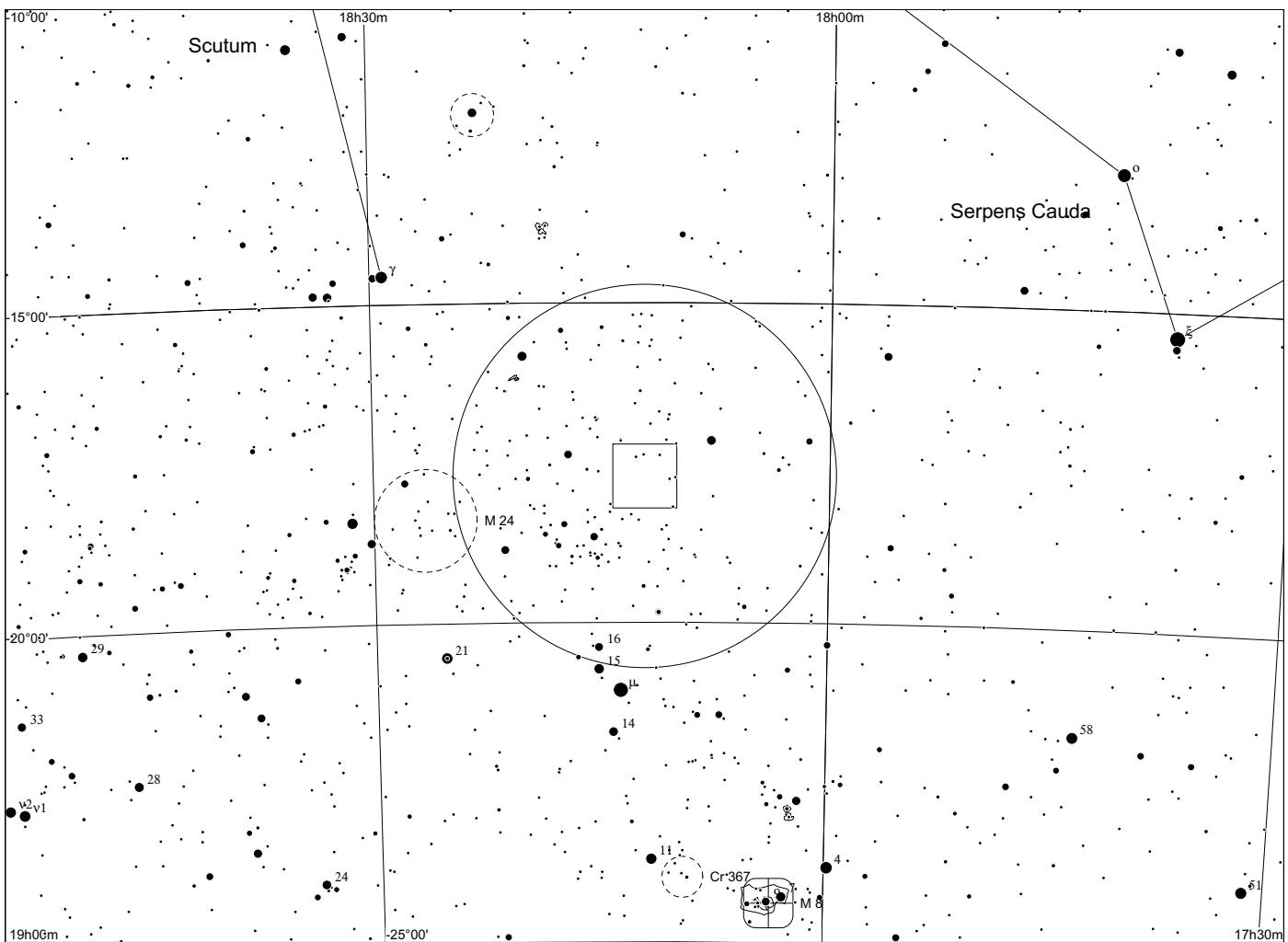
	other name	RA	dec	dia. '	F	S	B
Sh 2-040		18 12 02.1	-17 44 41	15	3	2	2

Distance: 2400 pc, Size: 10.5 pc, Source: [2003A&A...397..133R](#)

A look at this region in hydrogen-alpha shows that Sh 2-40 appears to be several bright knots of nebulosity extending north from the much larger nebula [Sh 2-41](#). Sh 2-40 lies in the same direction as the powerful radio source [W33](#), but [the distance estimate for W33 is about 4000 pc](#). So there seem to be two objects here in the same field of view, one visible only at radio frequencies.

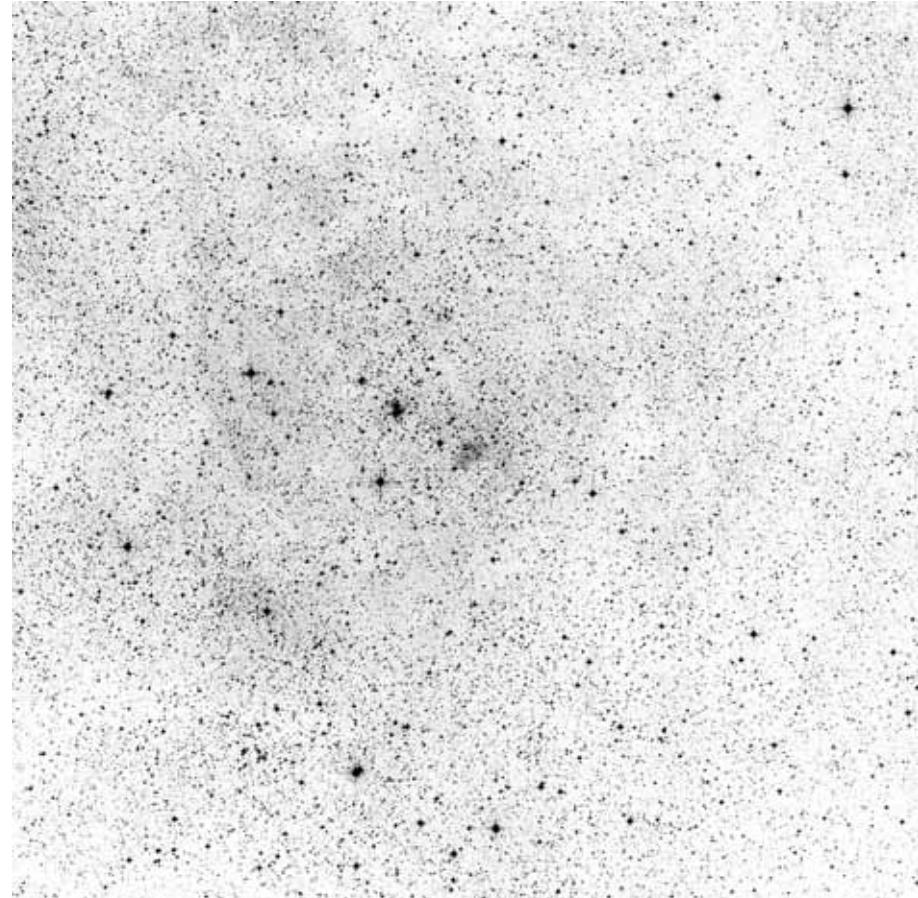
Sh 2-38, Sh 2-40, Sh-41 and Sh 2-42 all appear to be embedded in the Sagittarius OB4 association. The massive protostellar object IRAS 18089-1732 is in the same area of sky but is located at a distance of 3600 pc.

Observing notes:

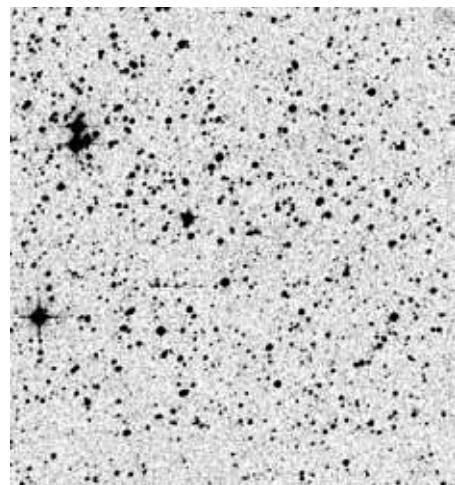


Sh 2 - 42

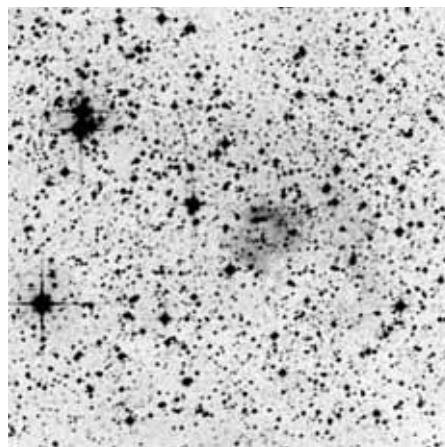
in Sagittarius



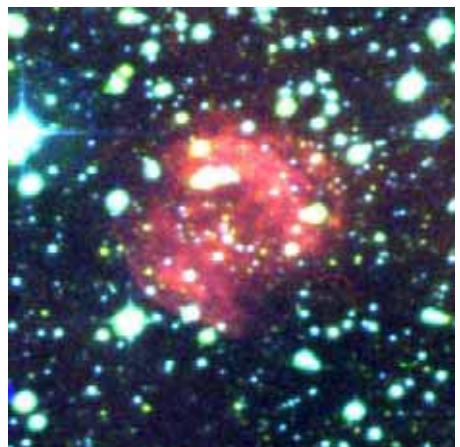
60x60, red



POSS blue



POSS red



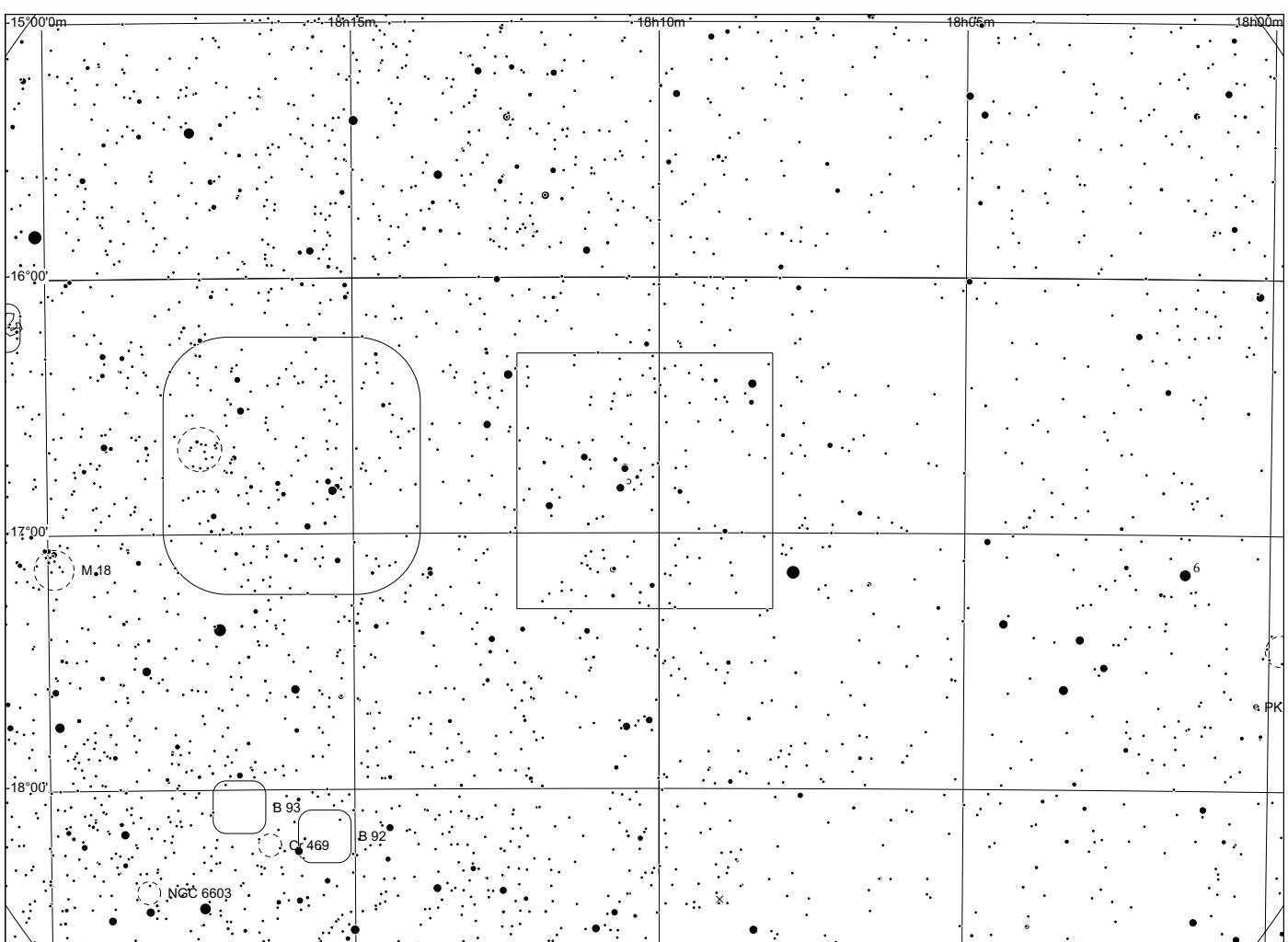
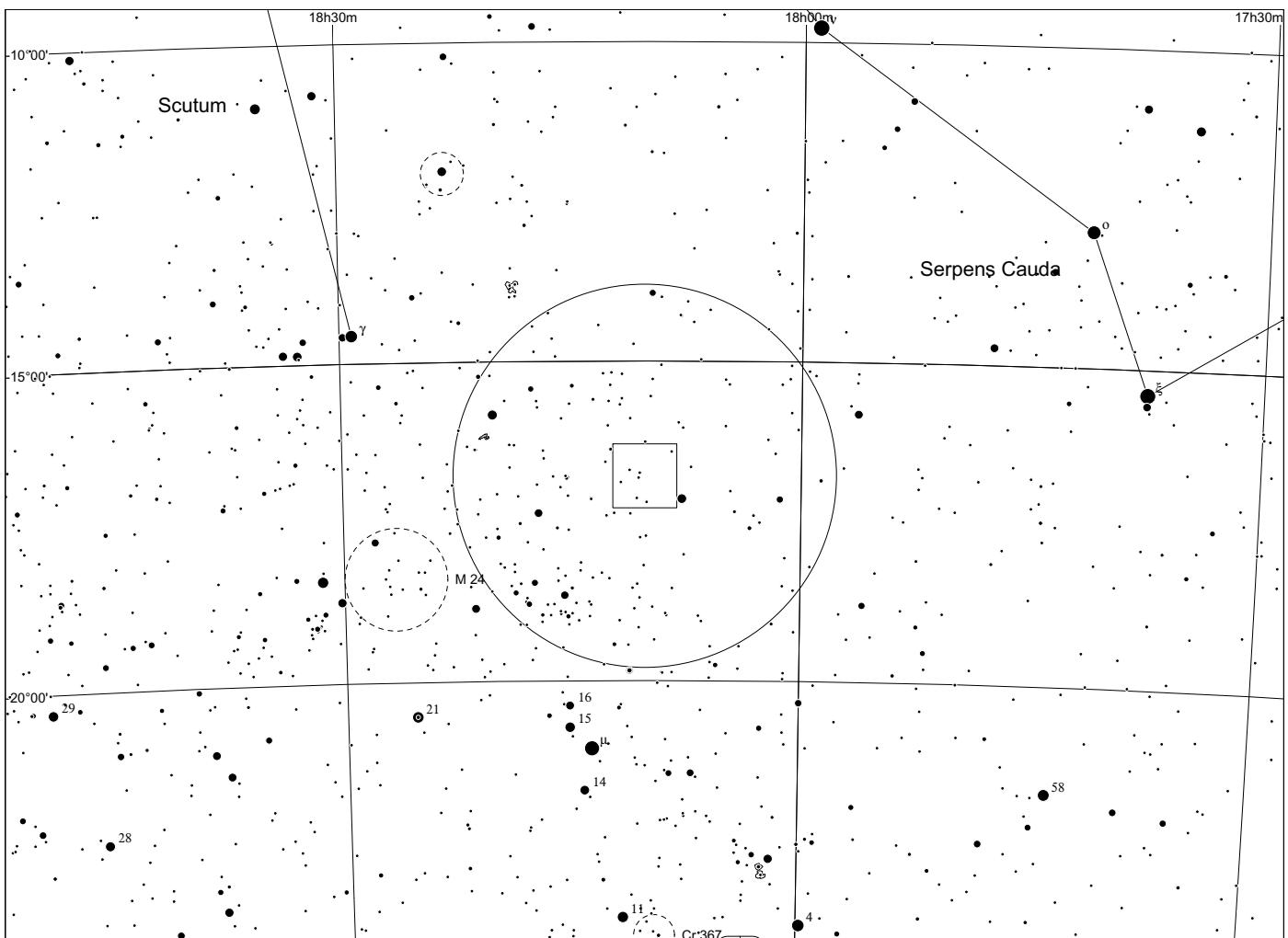
composite

	other name	RA	dec	dia. '	F	S	B
Sh 2-042		18 10 16.9	-16 48 55	3	3	1	2

Distance: 2400 pc, Size: 2.1 pc, Source: [2003A&A...397..133R](#)

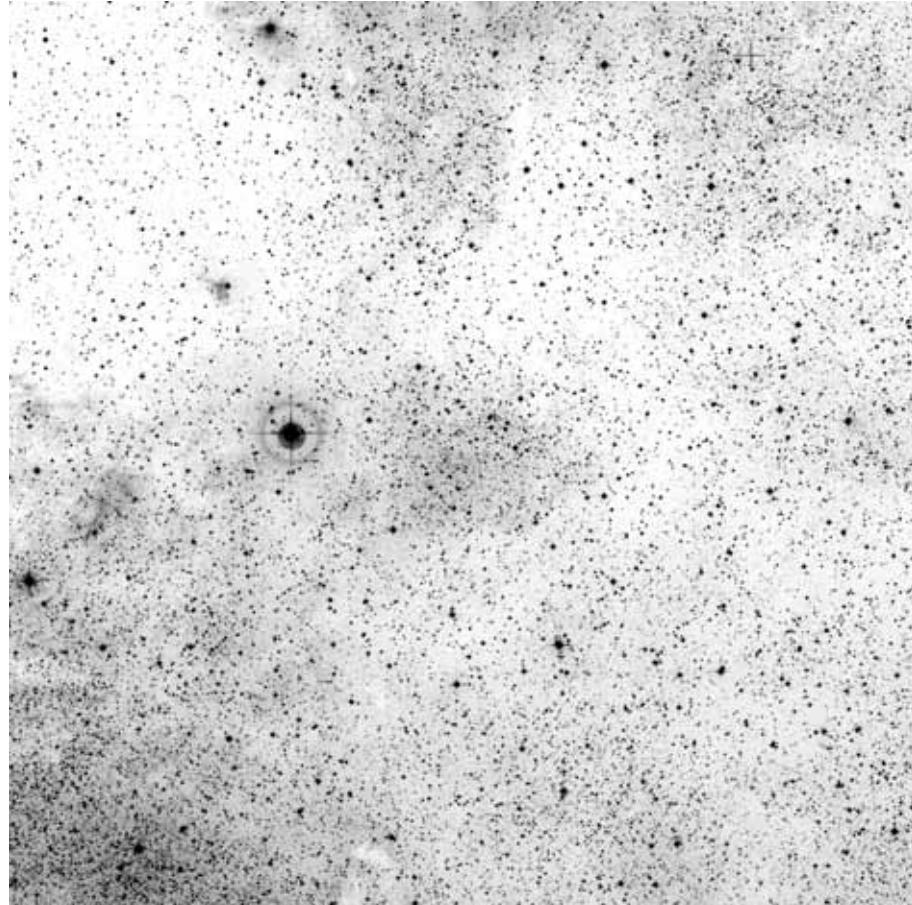
Sh 2-42 is believed to be the planetary nebula [PN G013.3+01.1](#).

Observing notes:

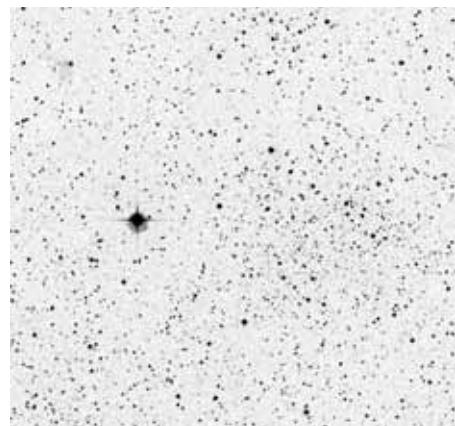


Sh 2 - 43

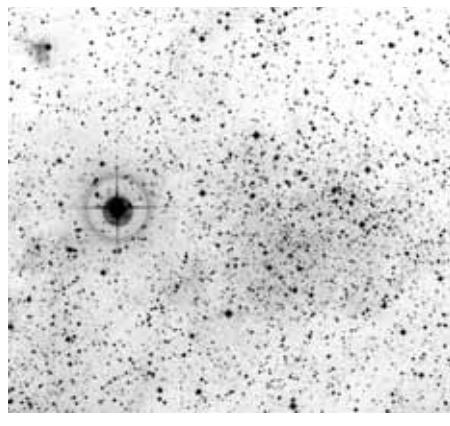
in Sagittarius



60x60, red



POSS blue



POSS red



composite

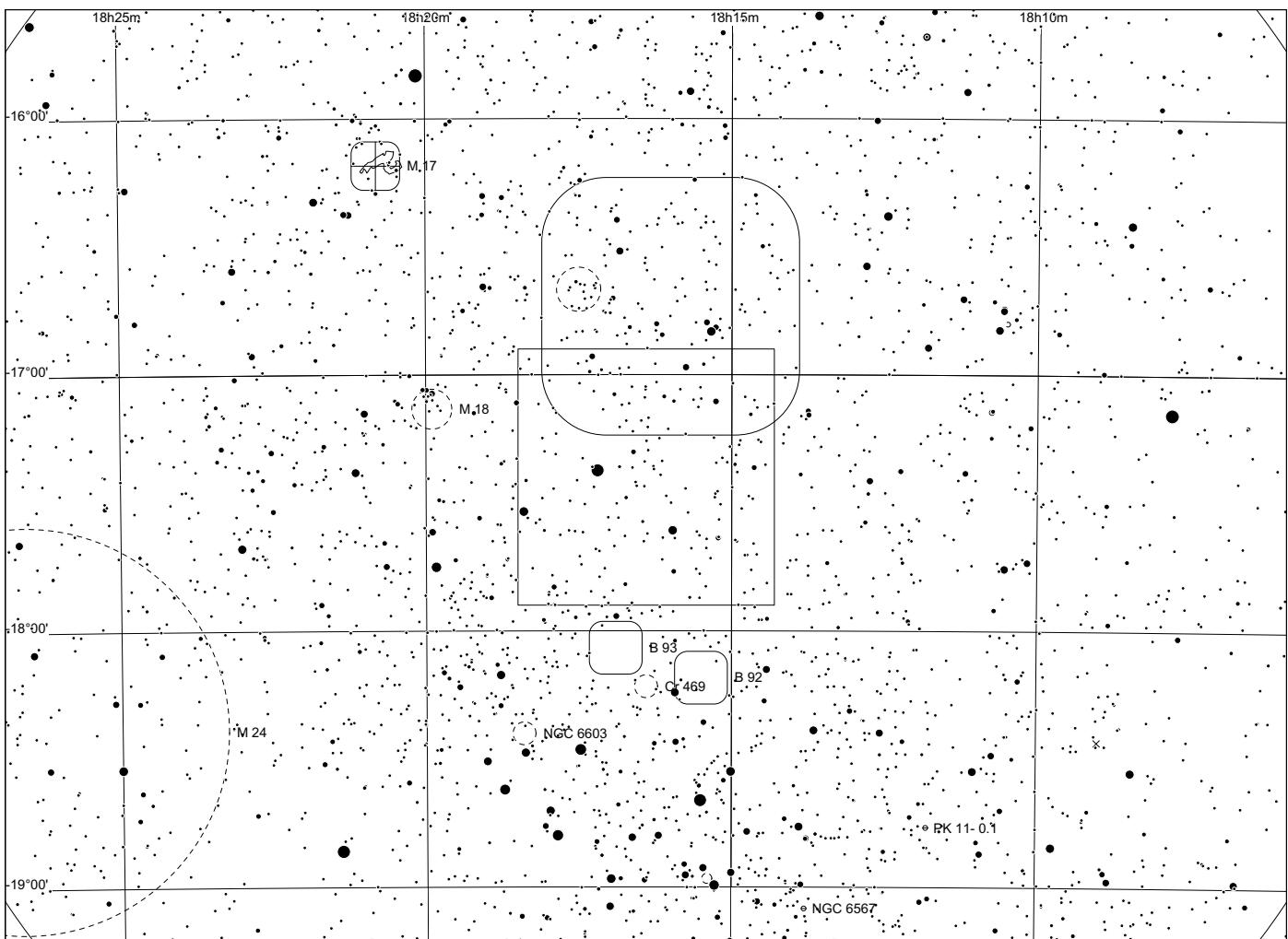
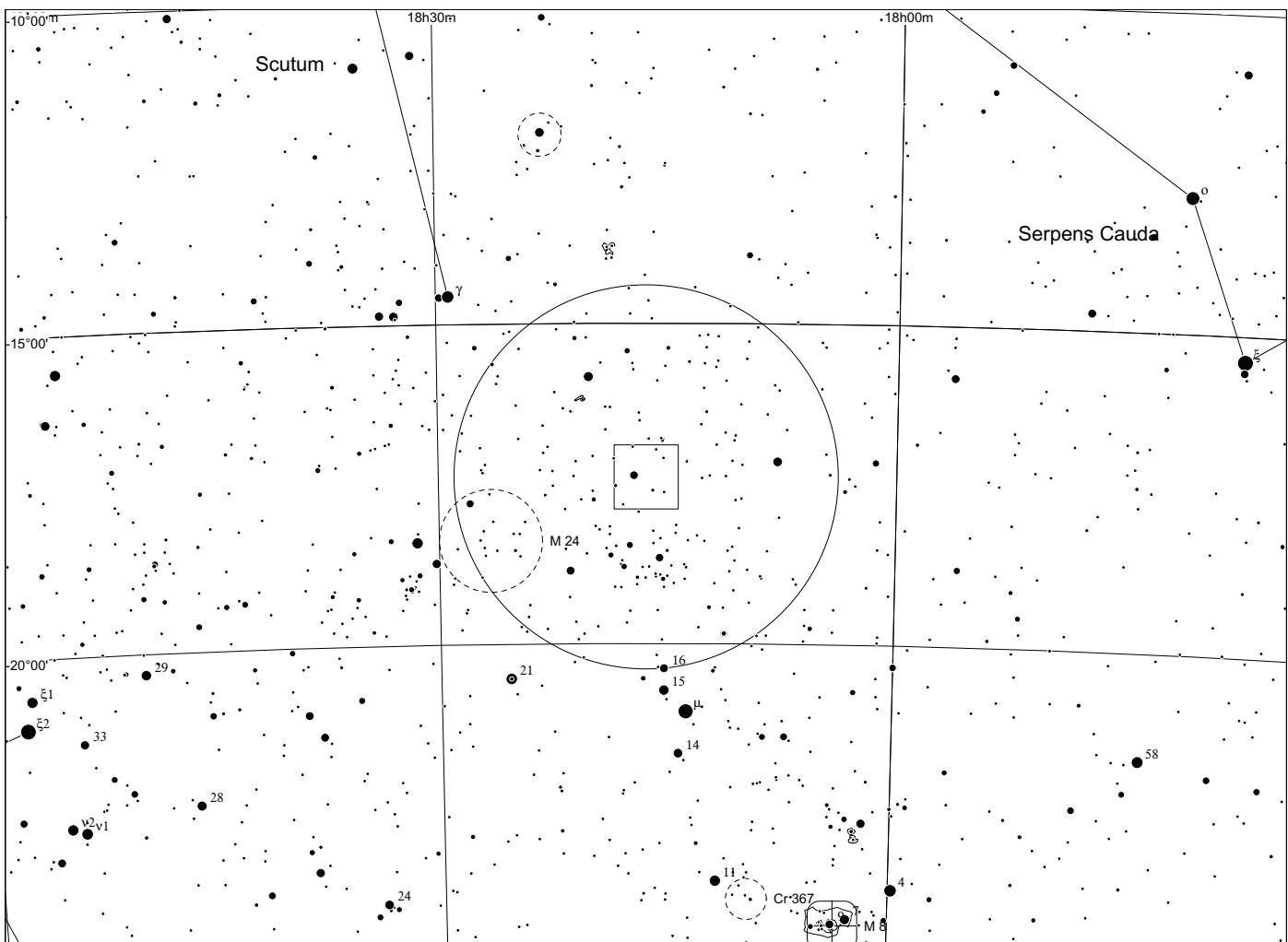
	other name	RA	dec	dia. '	F	S	B
Sh 2-043		18 16 24.6	-17 24 02	15	2	1	2

Distance: 1600 pc, Size: 7.0 pc, Source: [2003A&A...397..133R](#)

This faint diffuse nebula is in the same location as the suspected supernova remnant GAL 013.1-00.5 and appears to be located in an empty region bordered by the OB regions SGR OB1, SGR OB7 and SCT OB3.

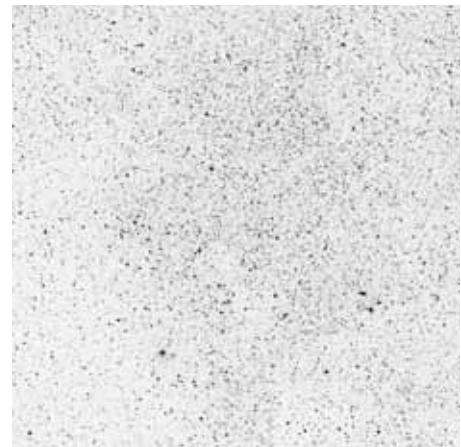
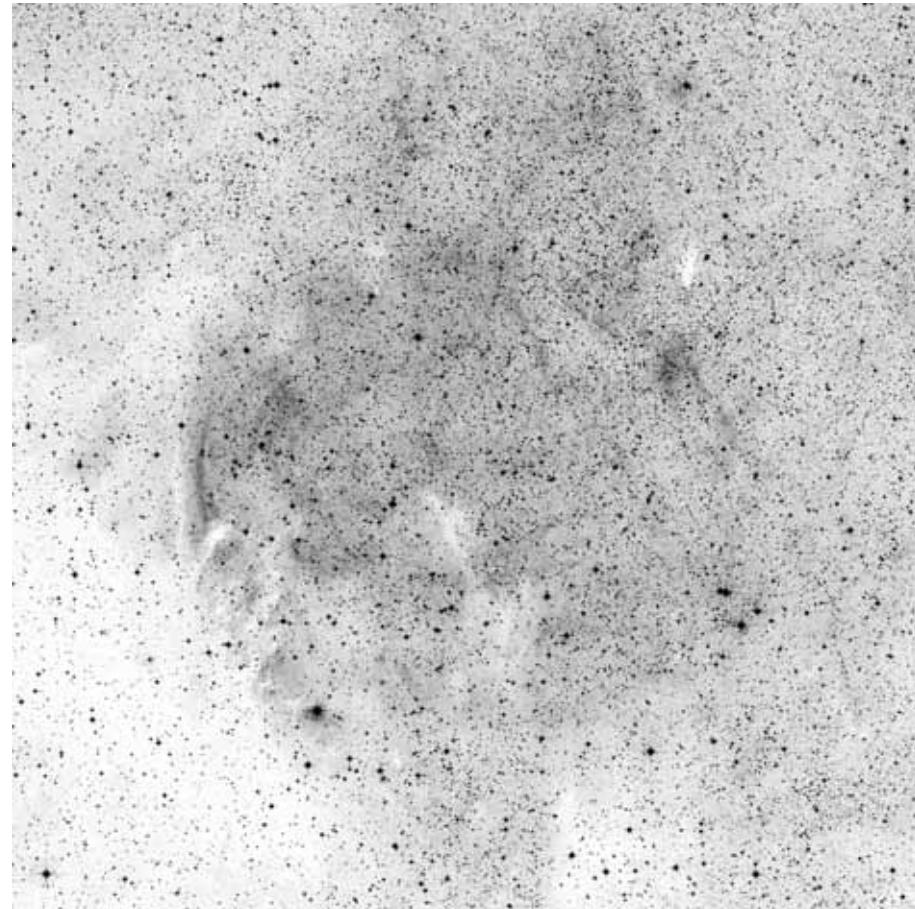
There is a 0.3 degree difference between the positions of RCW 156 and Sh 2-43. Sharpless gives the diameter of Sh 2-43 as 15 minutes = 0.25 degrees. RCW gives the diameter of RCW 156 as 50x50 minutes. These objects may not be part of the same nebula, but they are clearly very close in the sky.

Observing notes:

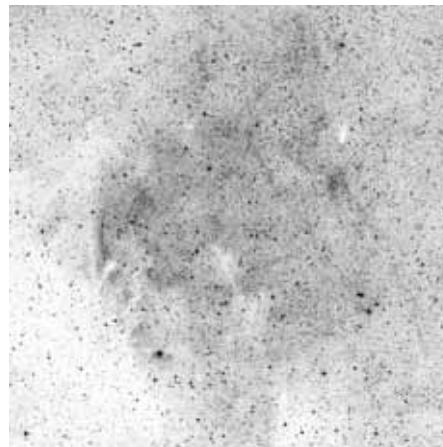


Sh 2 - 44

in Sagittarius



POSS blue



POSS red



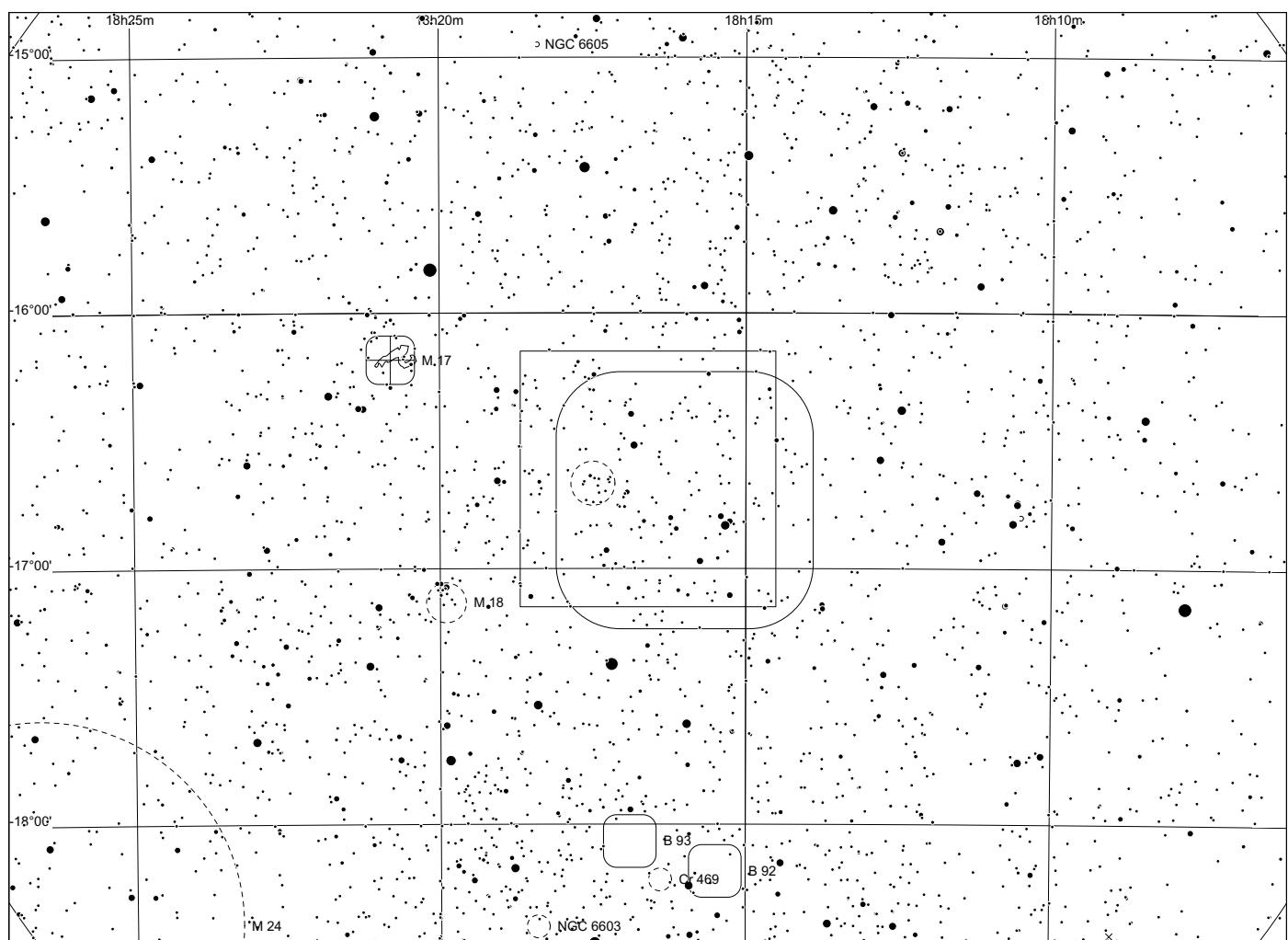
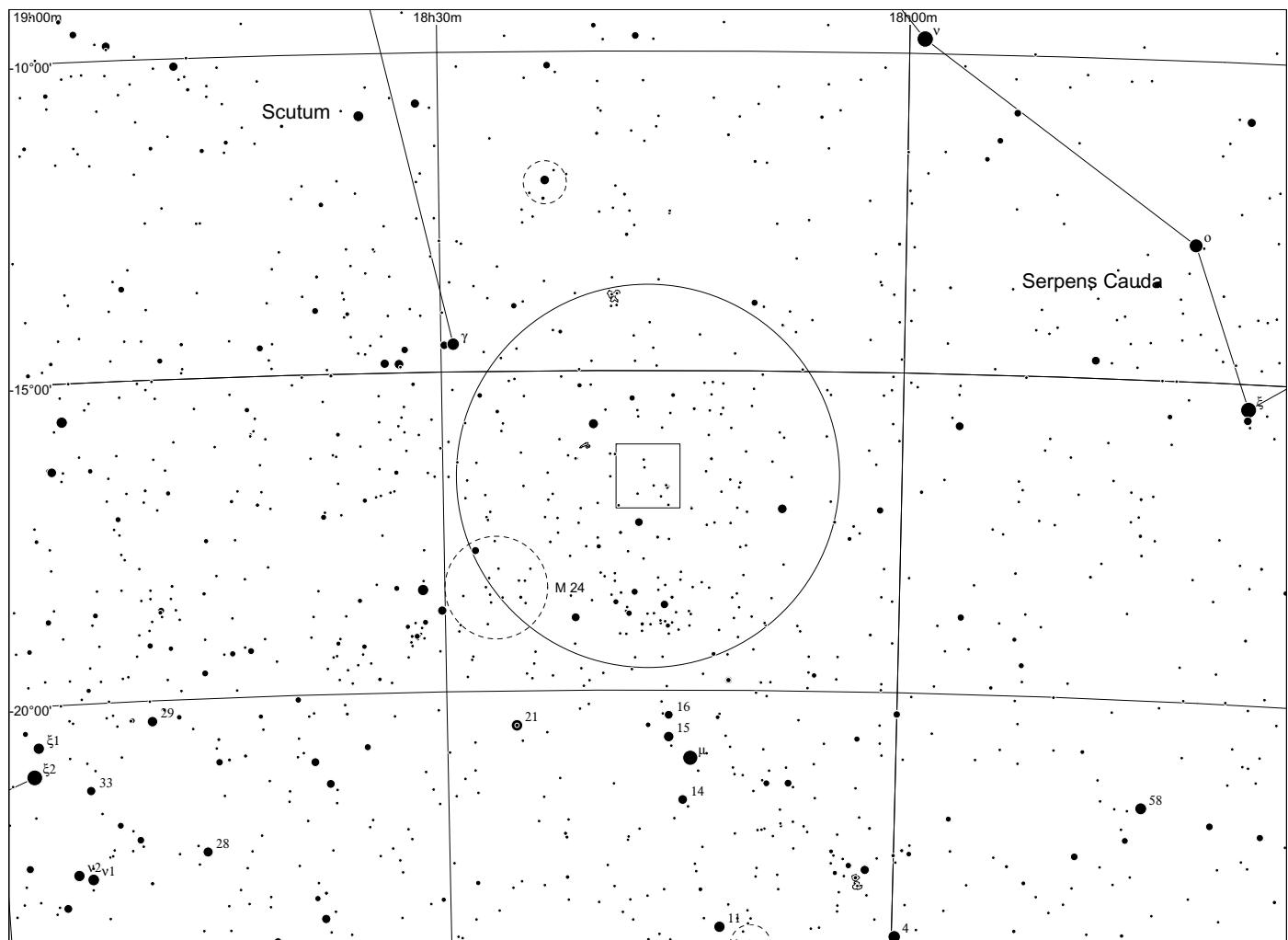
composite

	other name	RA	dec	dia. '	F	S	B
Sh 2-044	IC 4701	18 16 28.8	-16 44 01	60	3	2	2

Distance: 3610 pc, Size: 4.7 pc, Source: [2003A&A...397..213P](#)

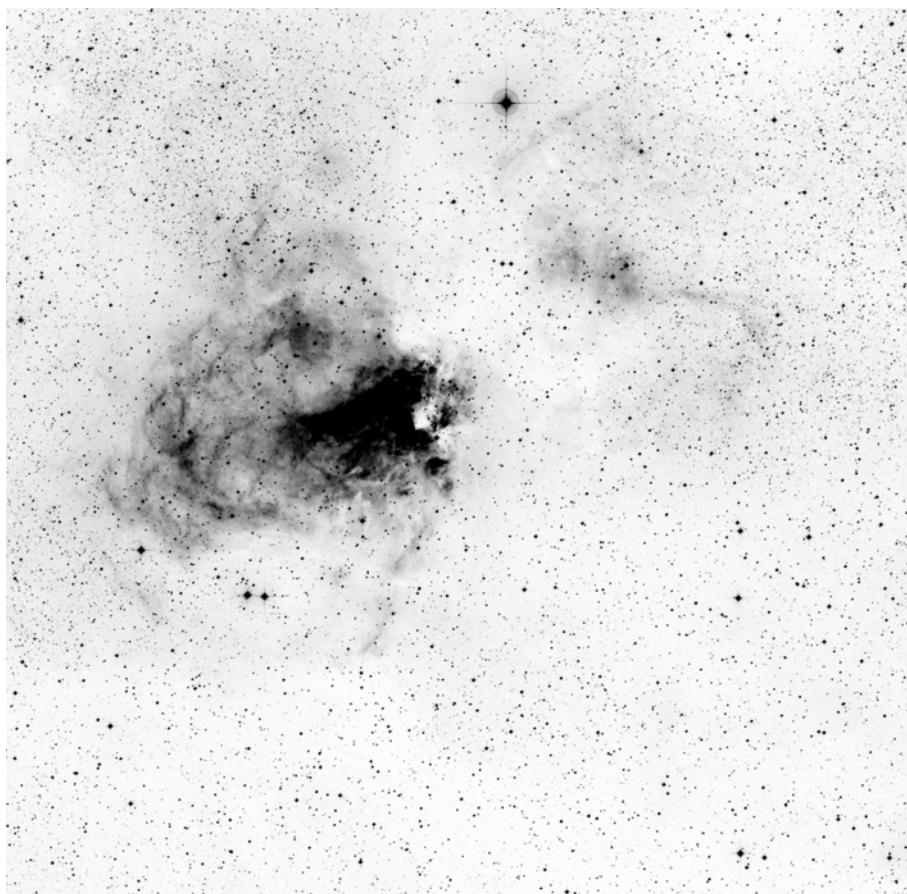
This nebula is connected to the Oe star [HD 167633](#) (which Humphreys connects to the Serpens OB1 association) and may be part of the [Scutum supershell](#) in the inner galaxy.

Observing notes:

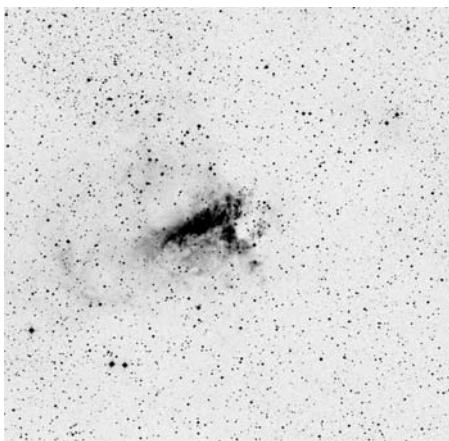


Sh 2 - 45

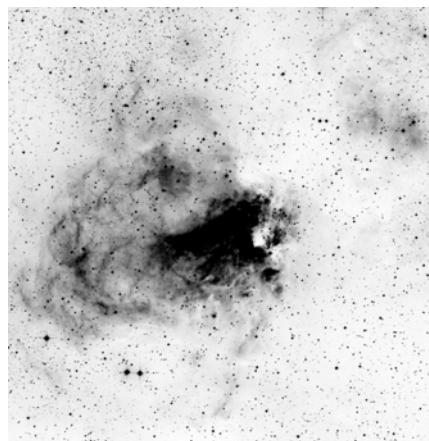
in Sagittarius



60x60, red



POSS blue



POSS red



narrowband Dean Salman

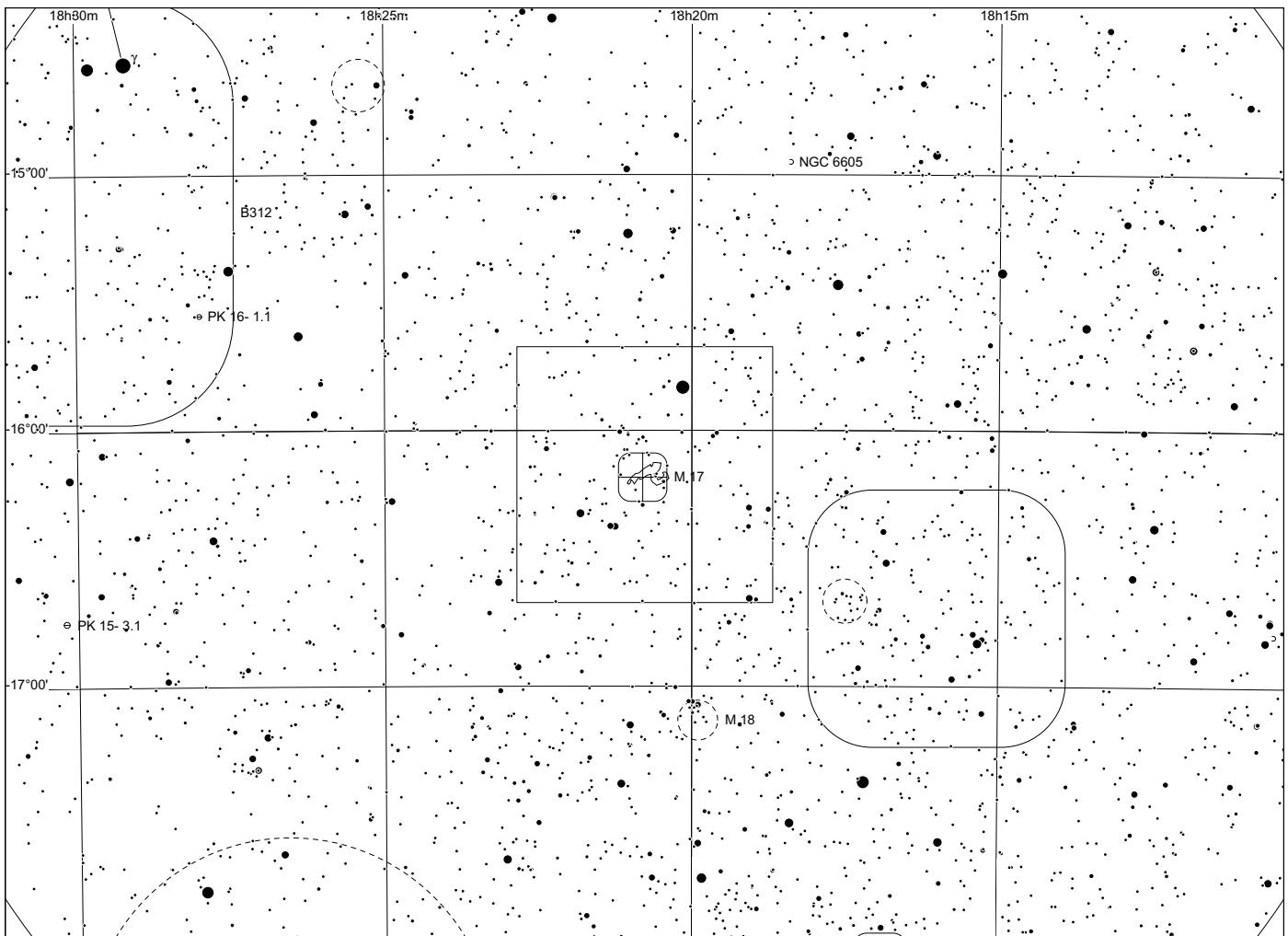
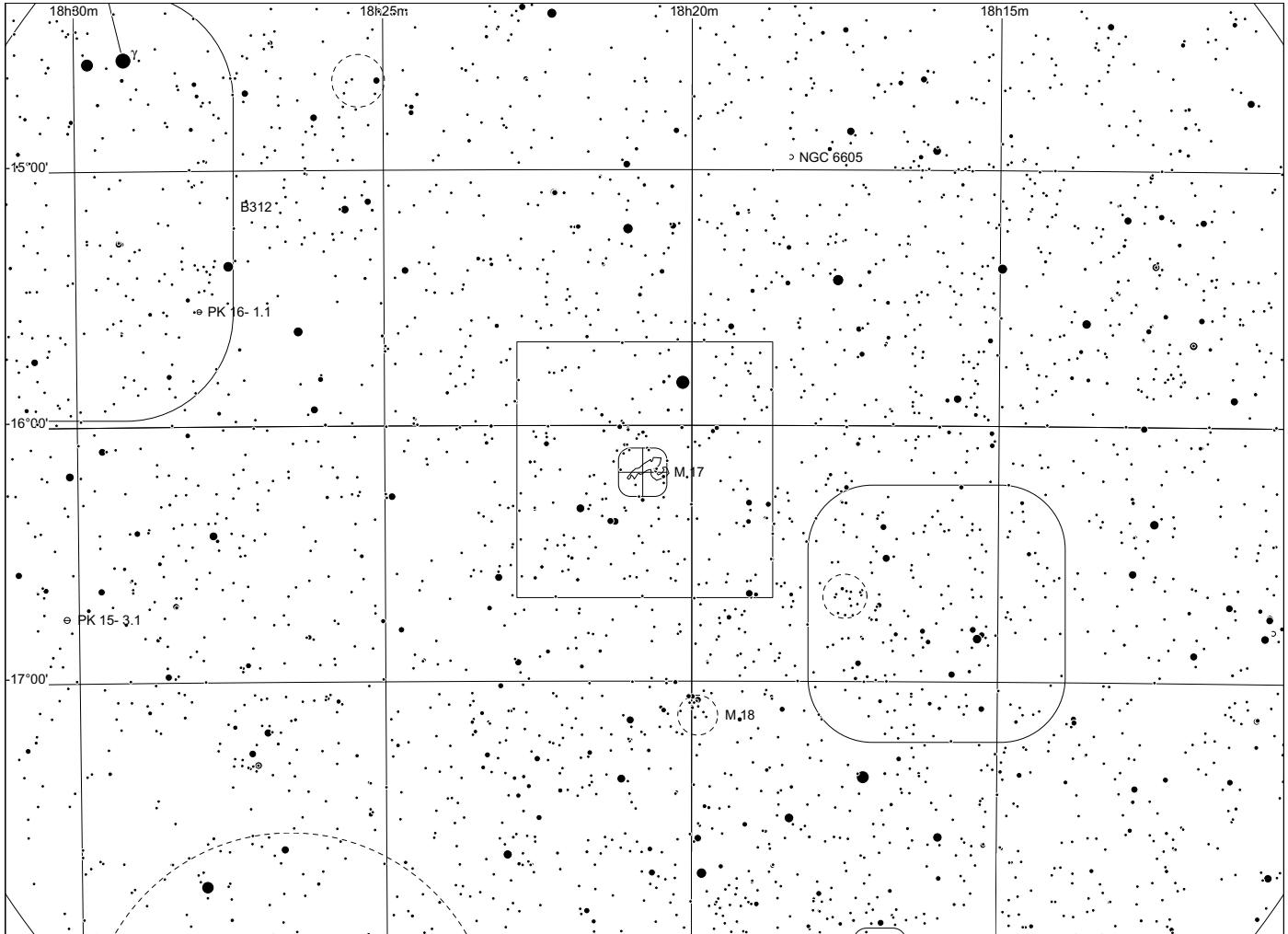
	other name	RA	dec	dia. '	F	S	B
Sh 2-045	M17 = NGC6618 = Swan Nebula	18 20 46.0	-16 10 24	60	3	3	3

Distance: 2095 pc, Size: 3.7 pc, Source: [2003A&A...397..213P](#)

This is M17, the Omega nebula, also called W38, the Swan nebula, and the Lobster nebula among other names. M17 is ionised by an O4V-O4V double star system ([Kleinmann's star](#)) at the core of the massive young cluster NGC 6618 (about one million years old), which contains over 800 stars, including 2 O5V star systems and 100 stars hotter than B9 (by comparison, Orion has 8 stars hotter than B9). The total ultraviolet flux is about 25 times higher than for Orion.

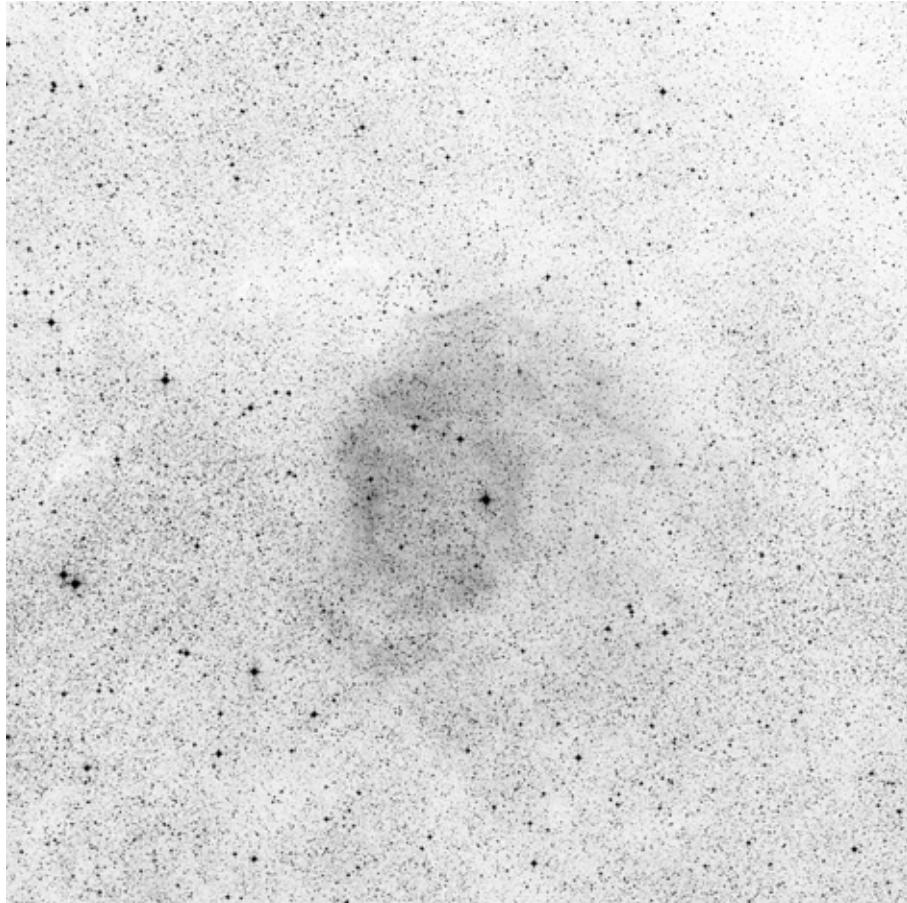
A large part of the nebula is hidden by a dark dust lane that runs near the central cluster and splits the main visible nebula from two attached nebulae on the other side of the dust lane (IC 4706 and IC 4707). M17 is a blister on the side of a much larger giant molecular cloud and star formation region (M17SW) that contains 30 thousand solar masses of molecular hydrogen.

Observing notes:

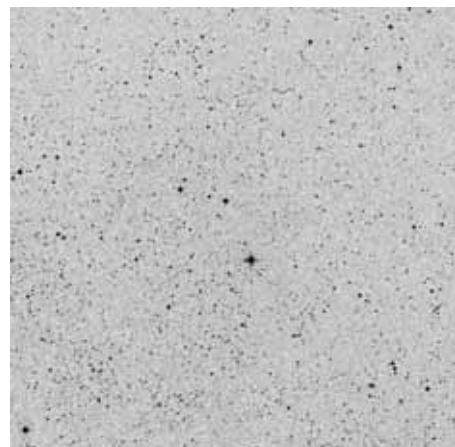


Sh 2 - 46

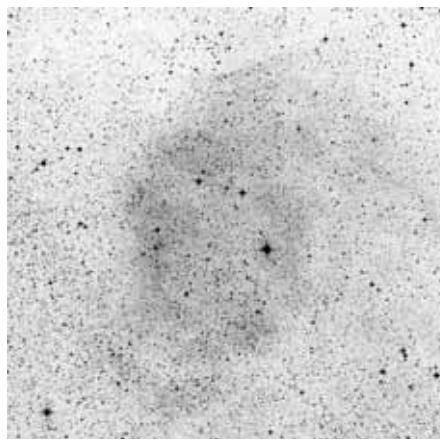
in Serpens



60x60, red



POSS blue



POSS red



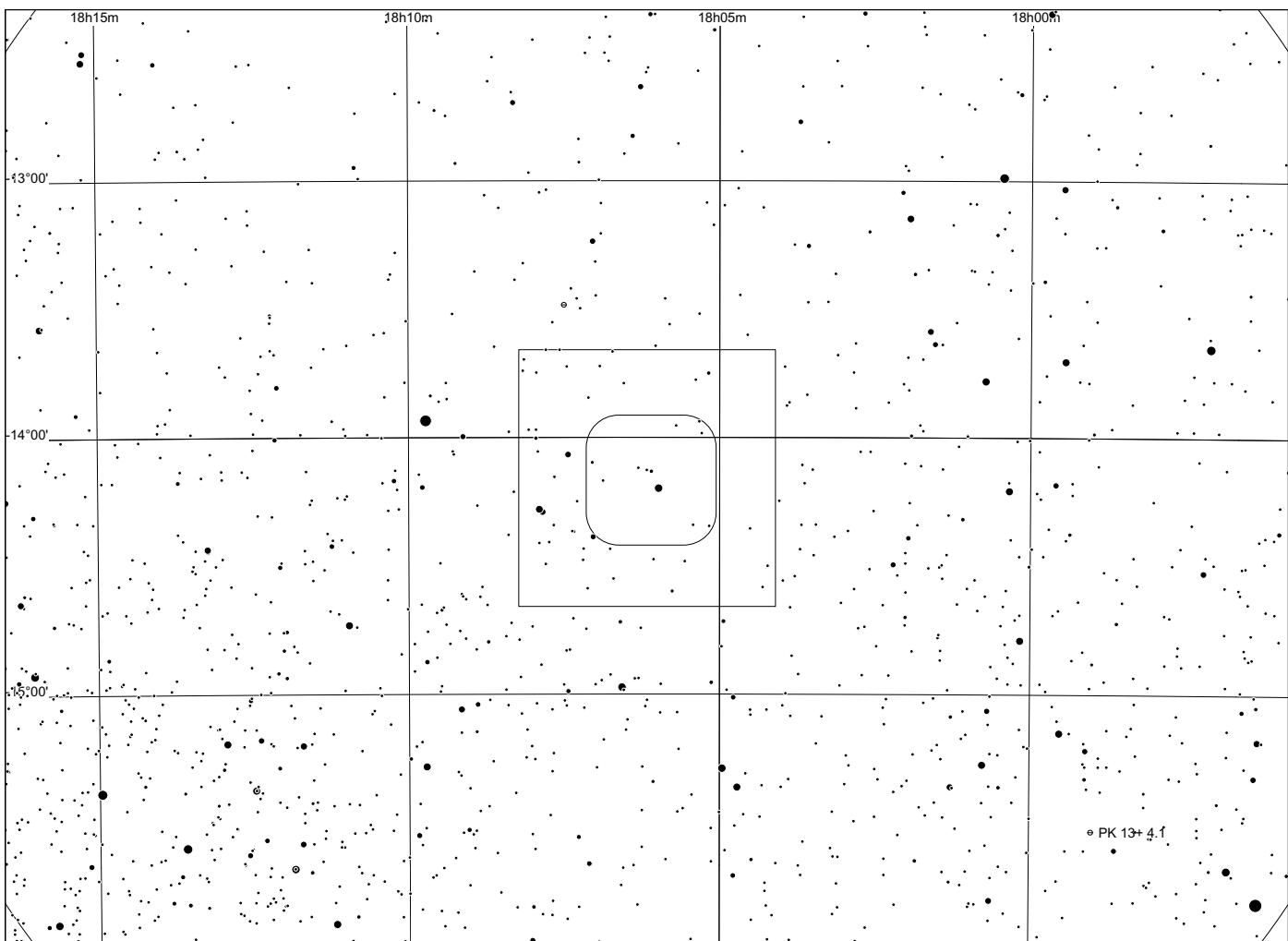
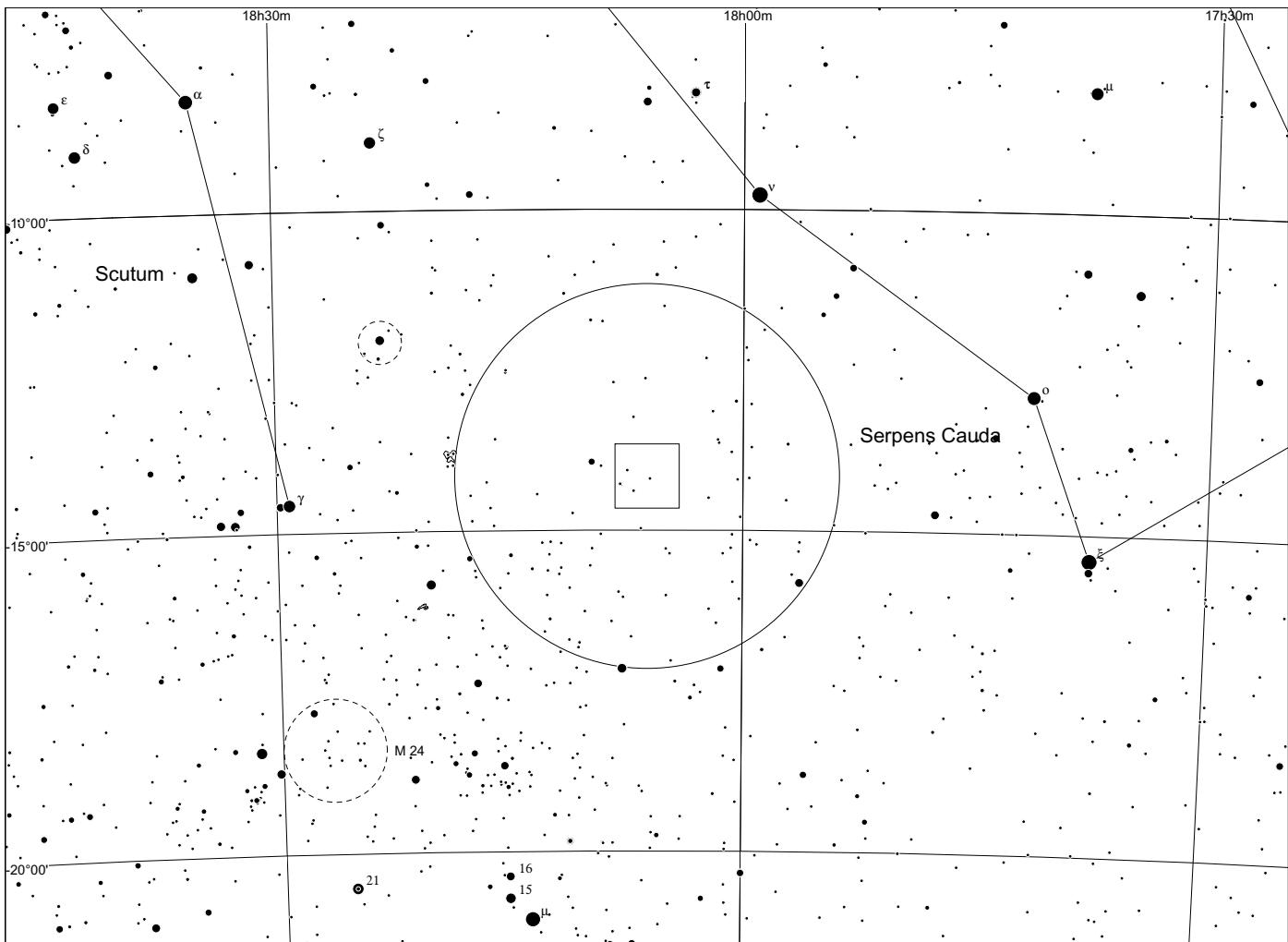
composite

	other name	RA	dec	dia. '	F	S	B
Sh 2-046		18 06 10.6	-14 09 31	25	2	2	2

Distance: 2000 pc, Size: 14.5 pc, Source: [1982ApJS...49..183B](#)

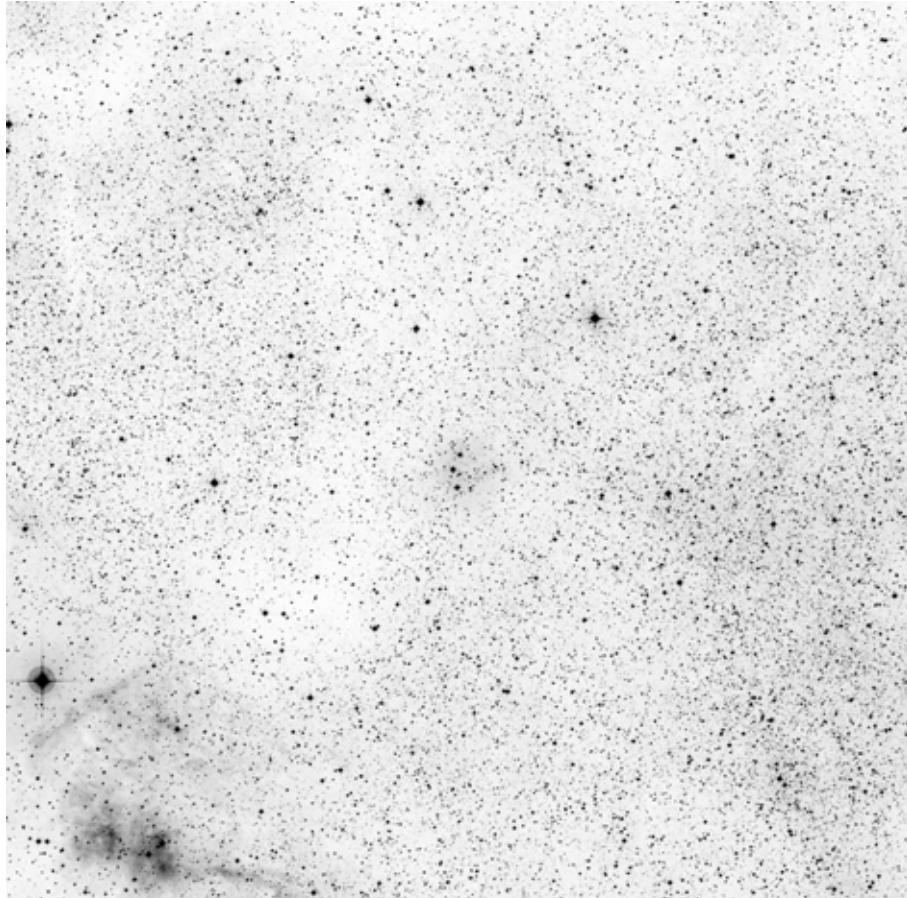
This nebula is located well above the galactic plane. The potential runaway O-star HD 165319 lies within or behind this nebula, which is nearest to the OB association Sagittarius OB6. Polycyclic aromatic hydrocarbons (PAHs) have been detected in this HII region.

Observing notes:

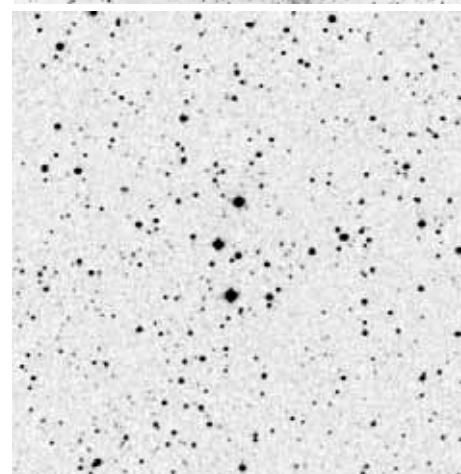


Sh 2 - 47

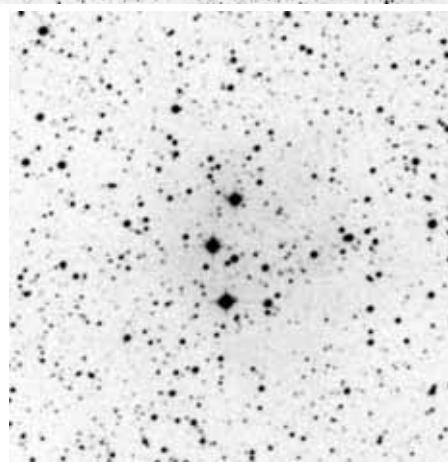
in Serpens



60x60, red



POSS blue



POSS red



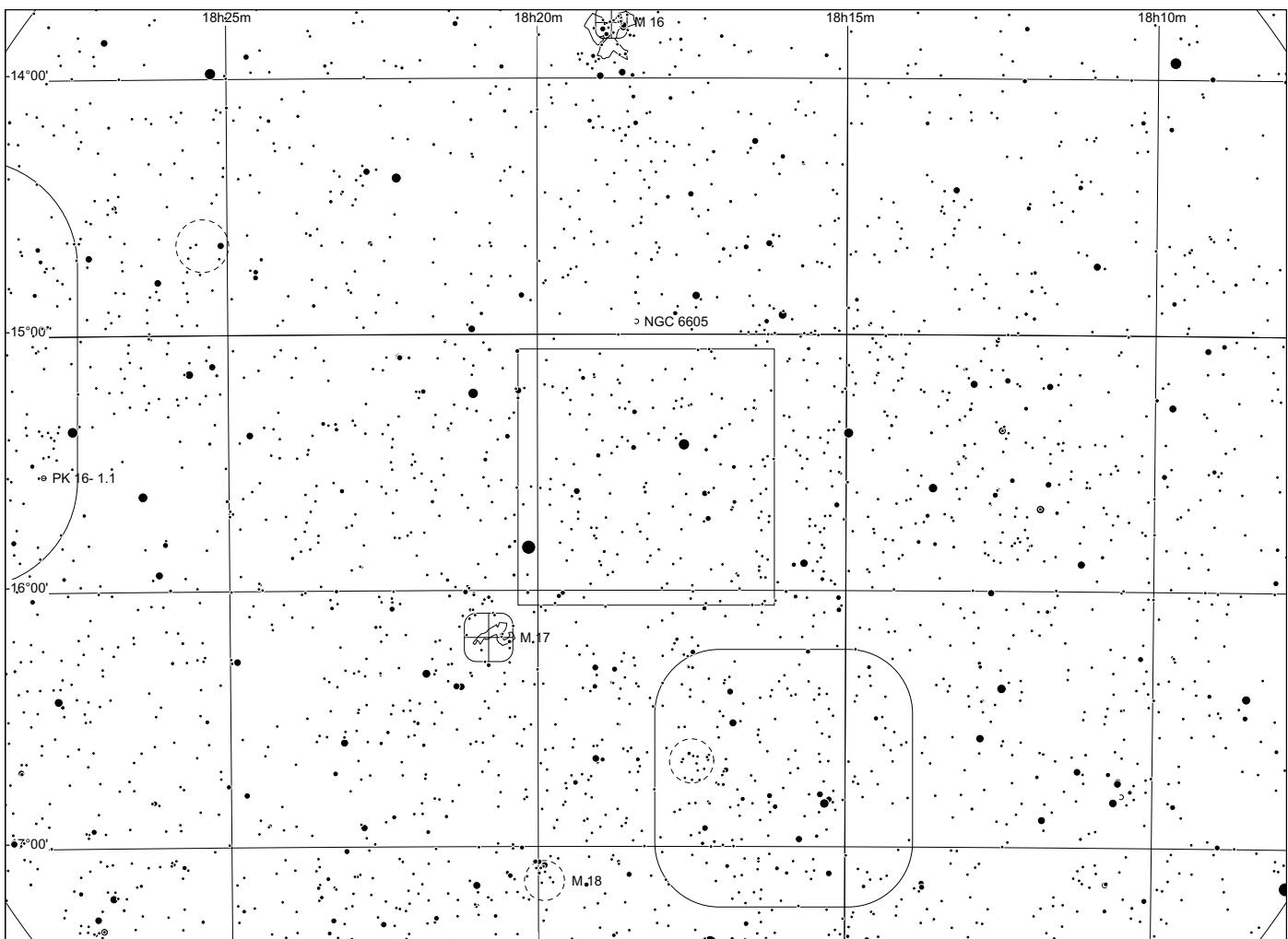
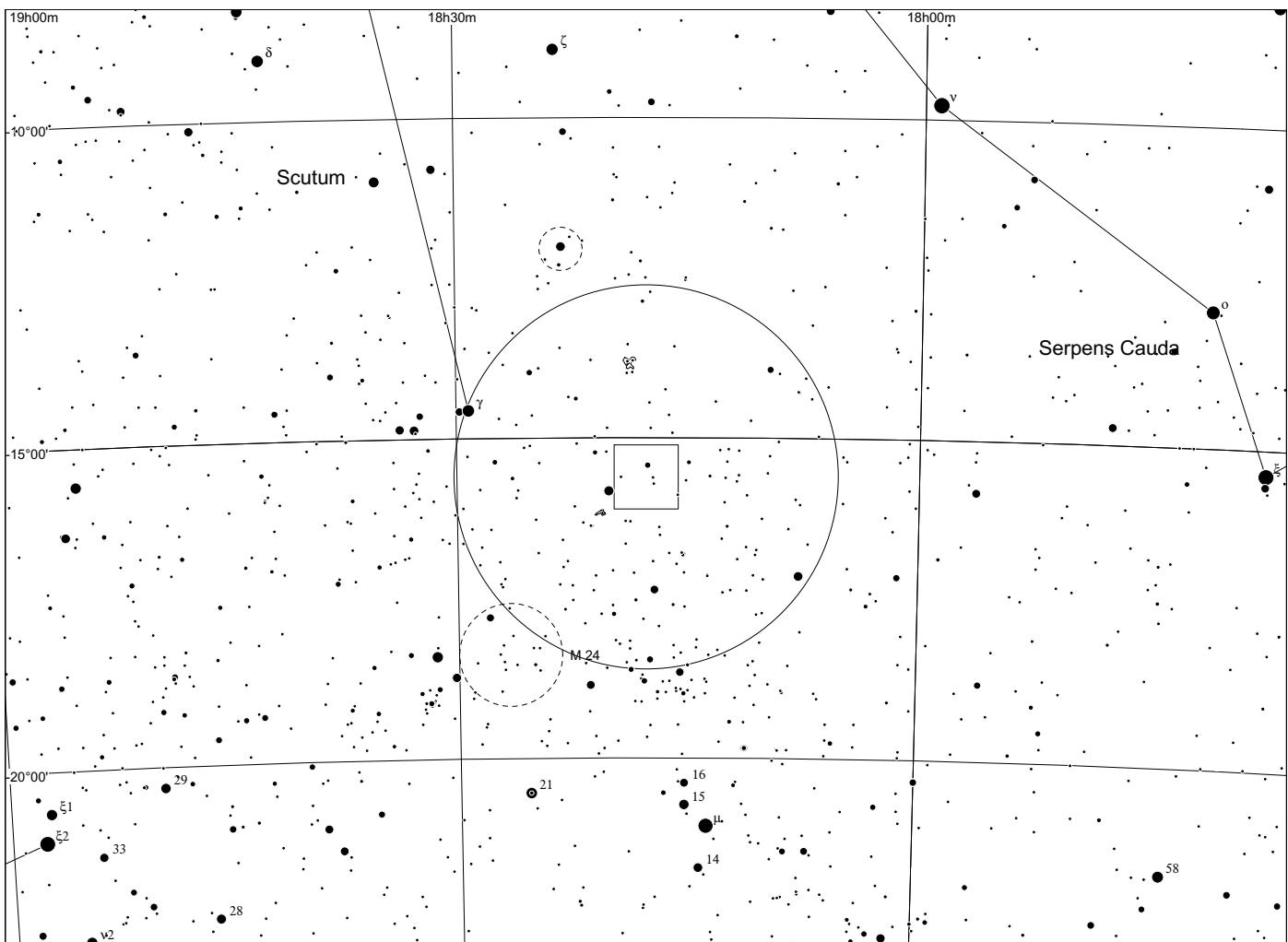
composite

	other name	RA	dec	dia. '	F	S	B
Sh 2-047		18 17 44.4	-15 36 50	5	1	2	2

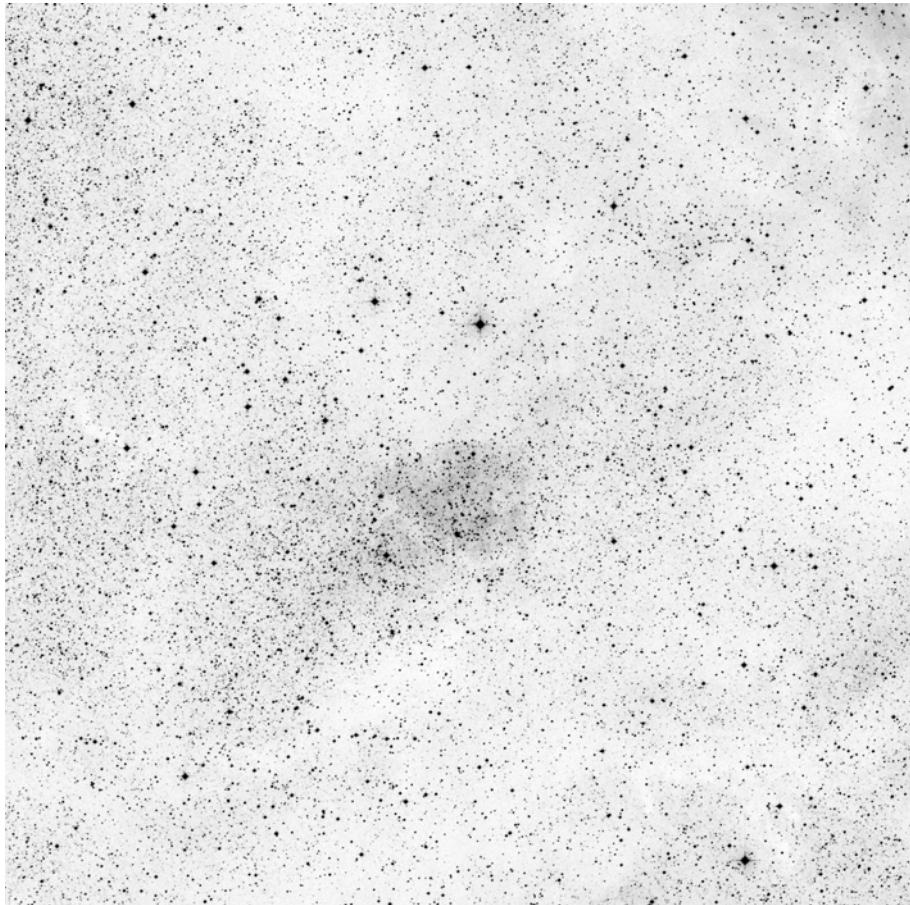
Distance: 3100 pc, Size: 4.5 pc, Source: [1985A&AS...61..537L](#)

The ionising star for this small nebula is probably the B0.5 III giant star S-47/3, which is at a distance of about 3100 pc.

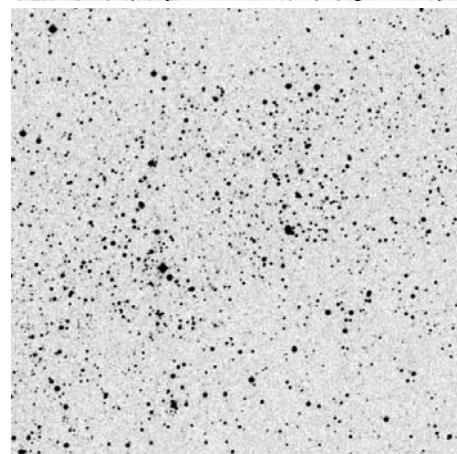
Observing notes:



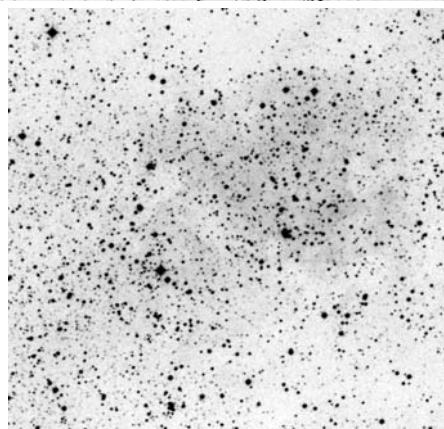
Sh 2 - 48
in Serpens



60x60, red



POSS blue



POSS red



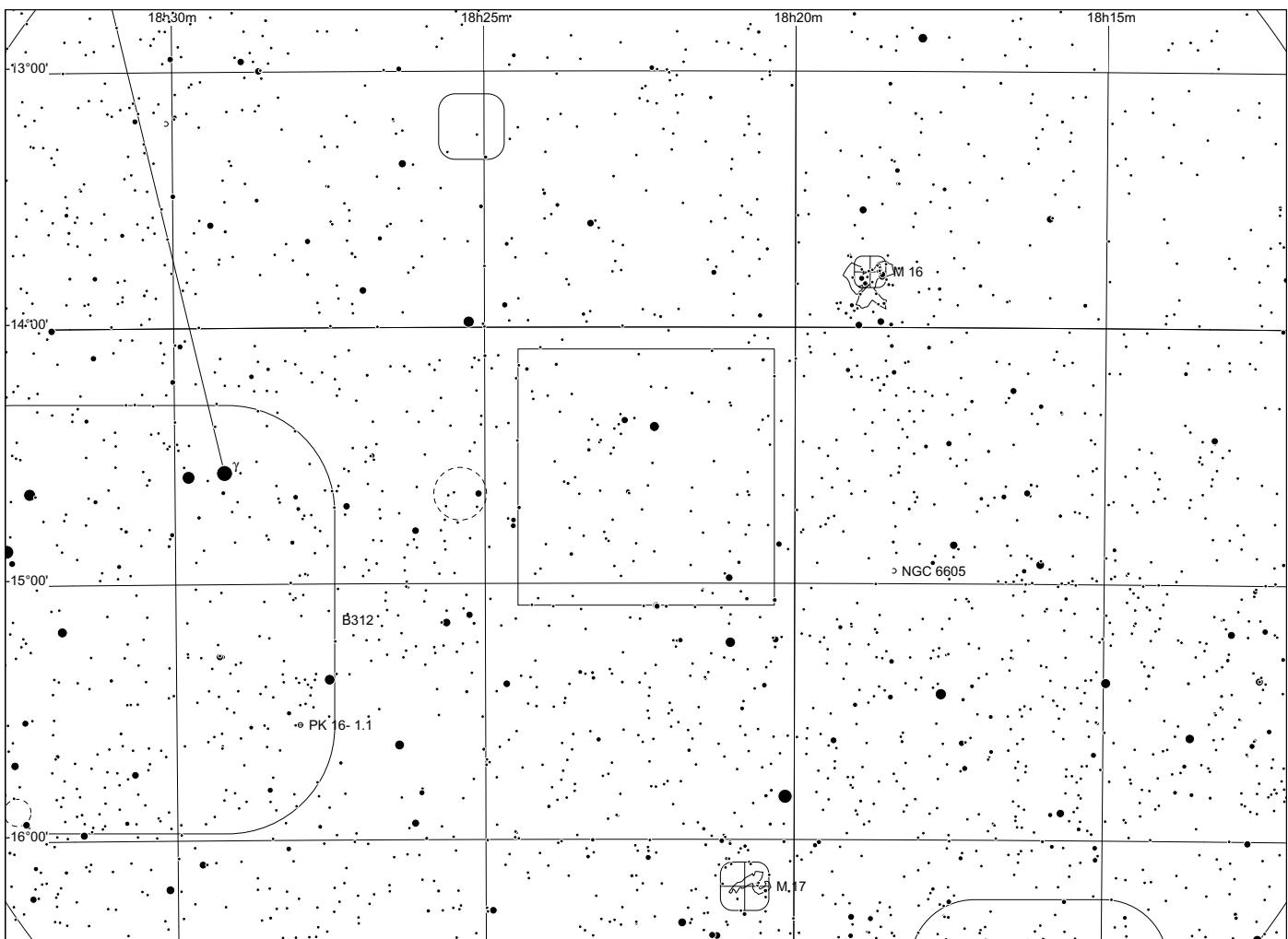
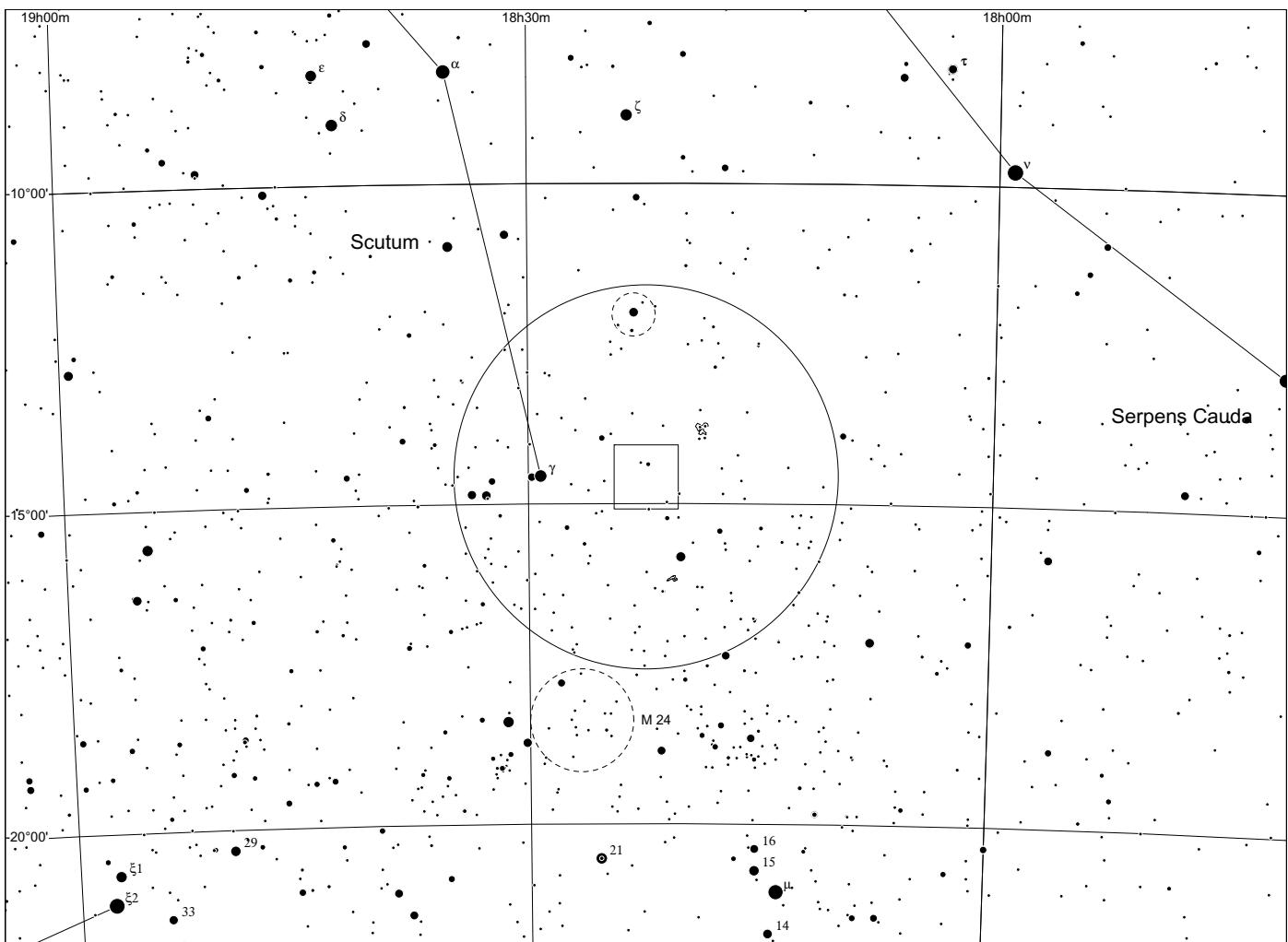
RGB Dean Salman

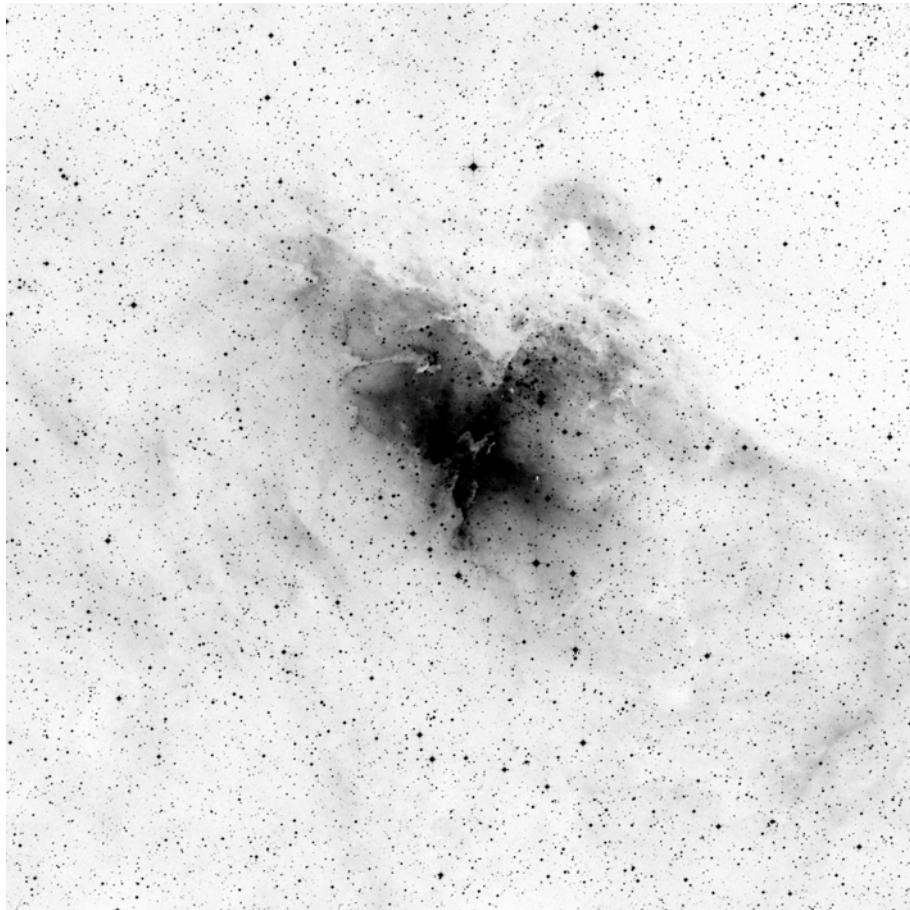
	other name	RA	dec	dia. '	F	S	B
Sh 2-048		18 22 24.1	-14 35 09	10	3	2	2

Distance: 3838 pc, Size: 12.3 pc, Source: [2003A&A...397..213P](#)

This region may be associated with the Scutum supershell.

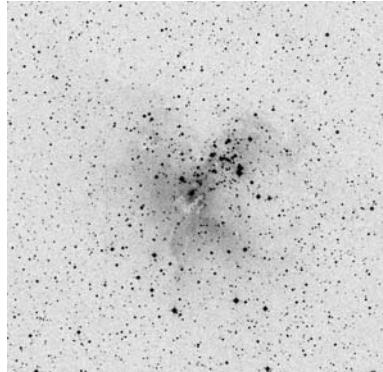
Observing notes:



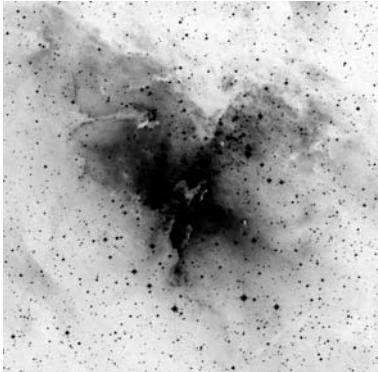


**Sh 2 - 49
in Serpens**

60x60, red



POSS blue



POSS red



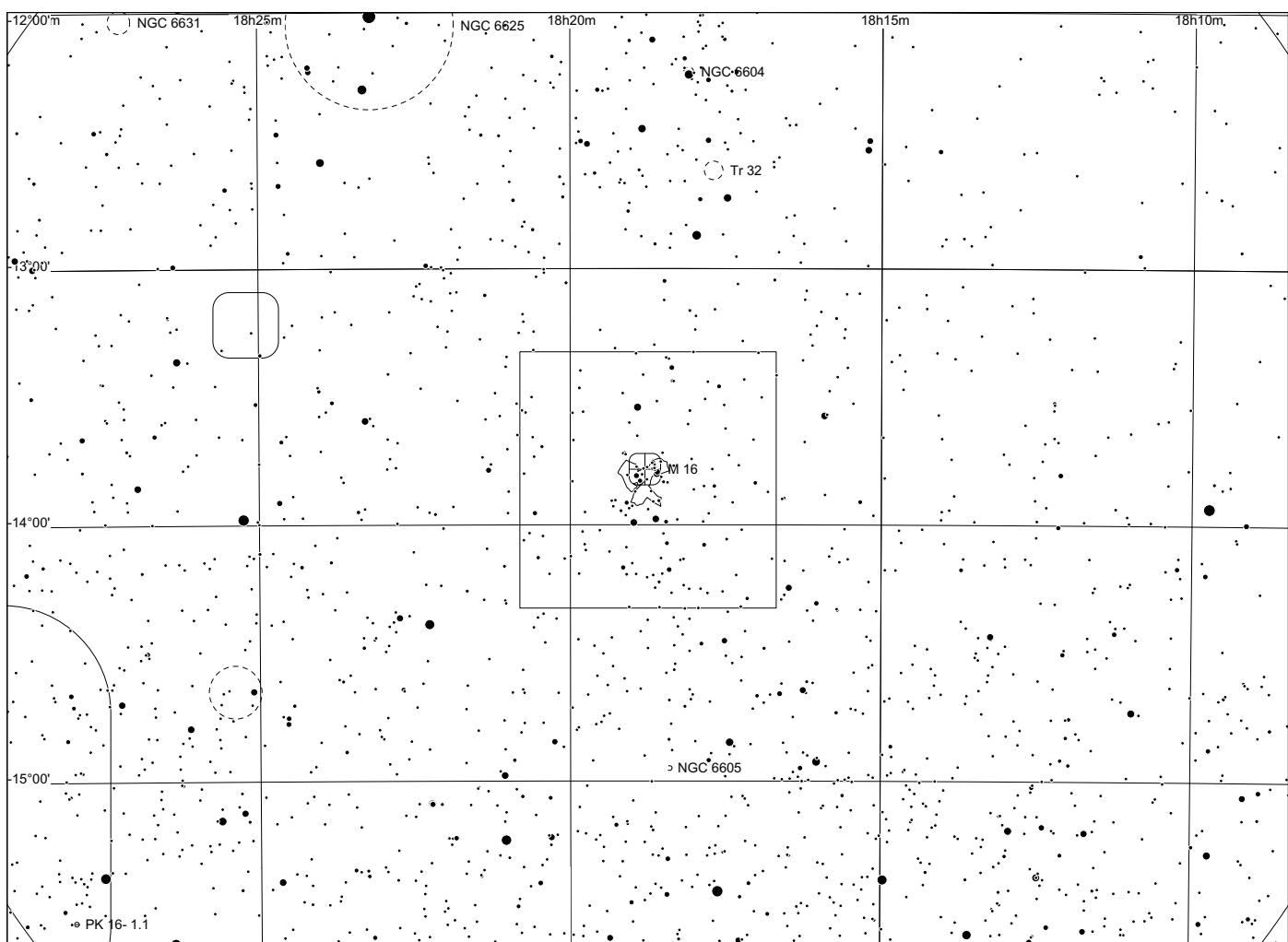
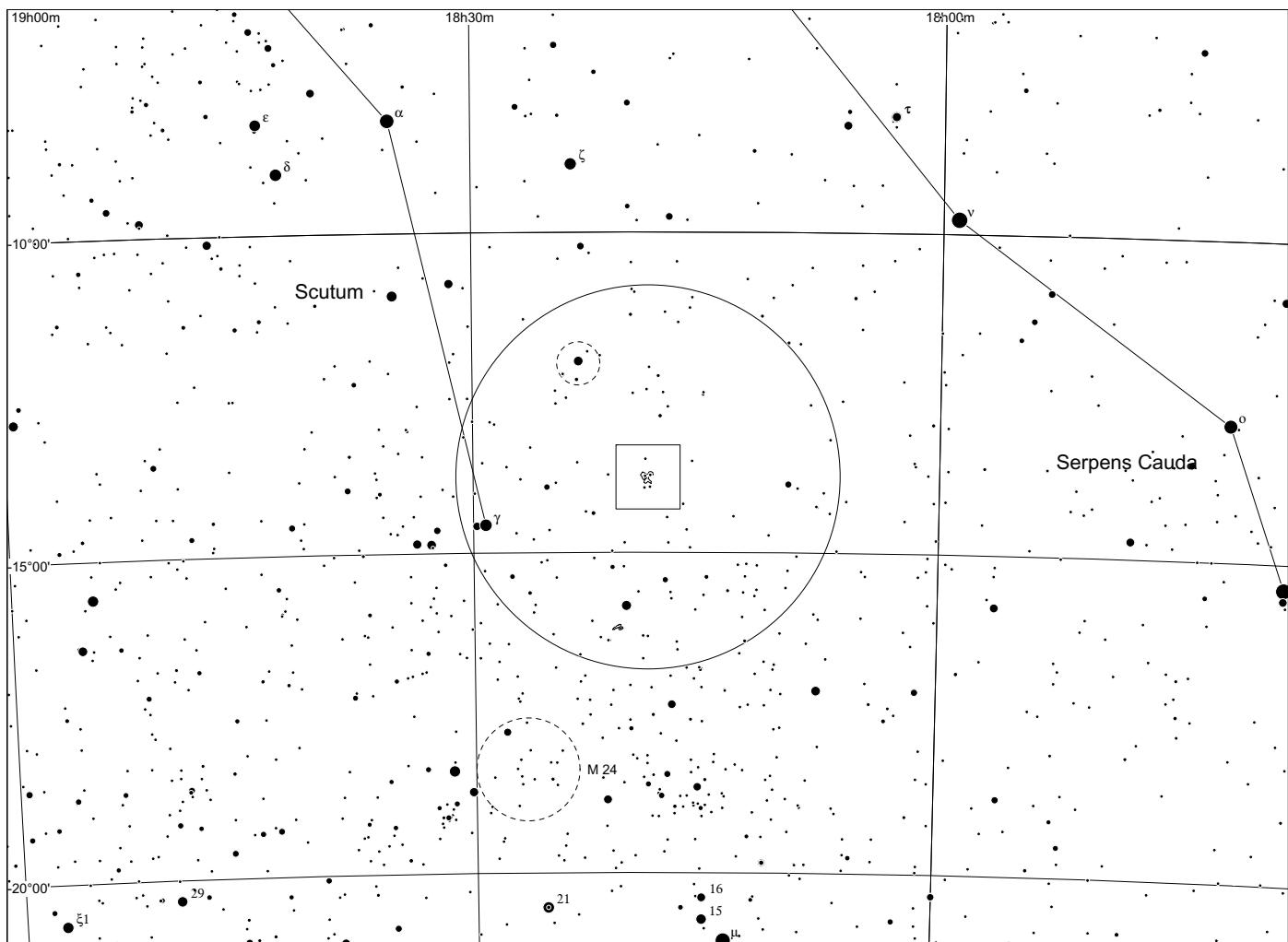
narrow band Dean Salman

	other name	RA	dec	dia. '	F	S	B
Sh 2-049	M16 = NGC6611 = Eagle Nebula	18 18 40.3	-13 57 42	90	3	3	3

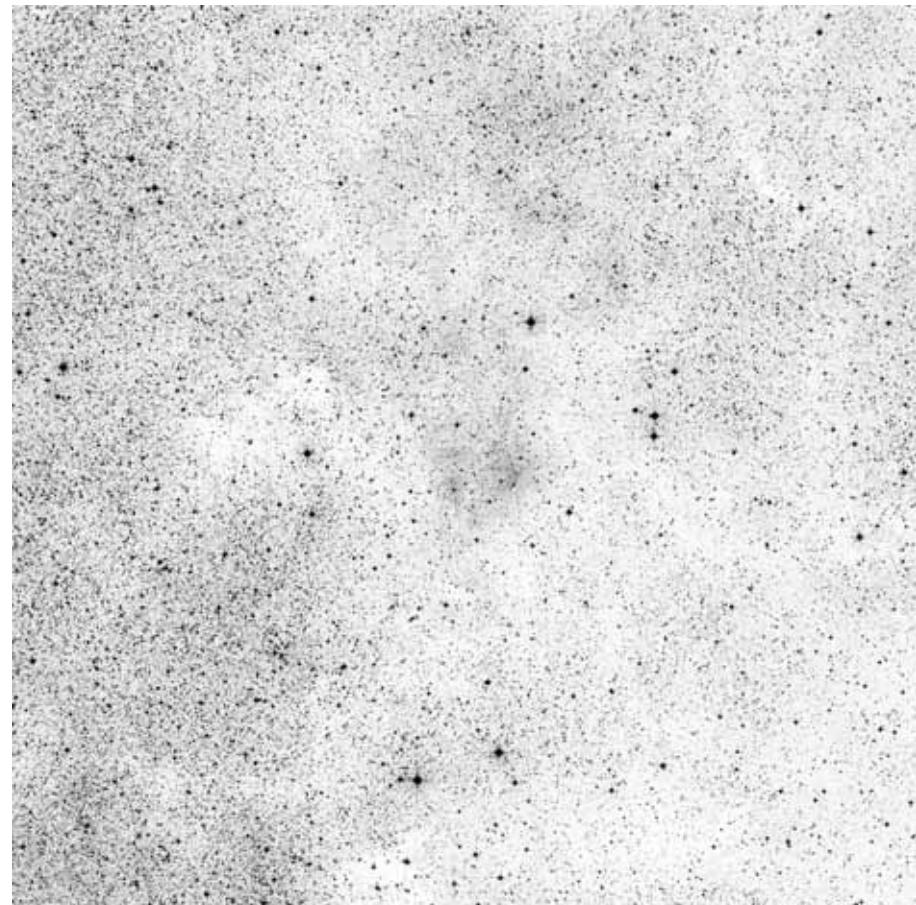
Distance: 1995 pc, Size: 51.8 pc, Source: [1993AJ....106.1906H](#)

This is M16, the Eagle Nebula. It is part of the W37 molecular cloud and is ionized by the NGC 6611 star cluster, which is part of the Serpens OB1 association.

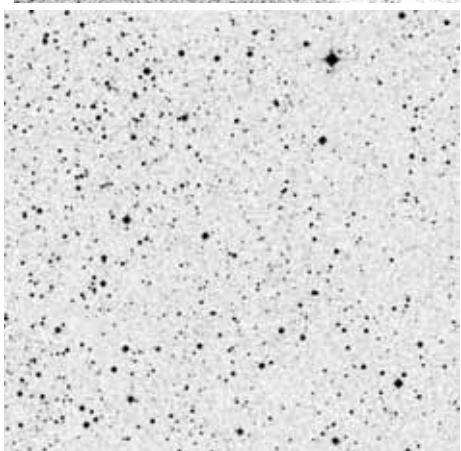
Observing notes:



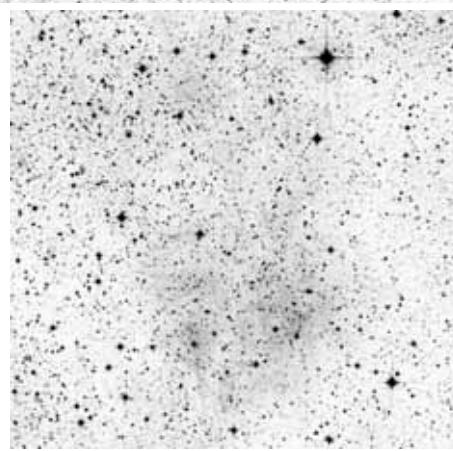
Sh 2 - 50
in Scutum



60x60, red



POSS blue



POSS red



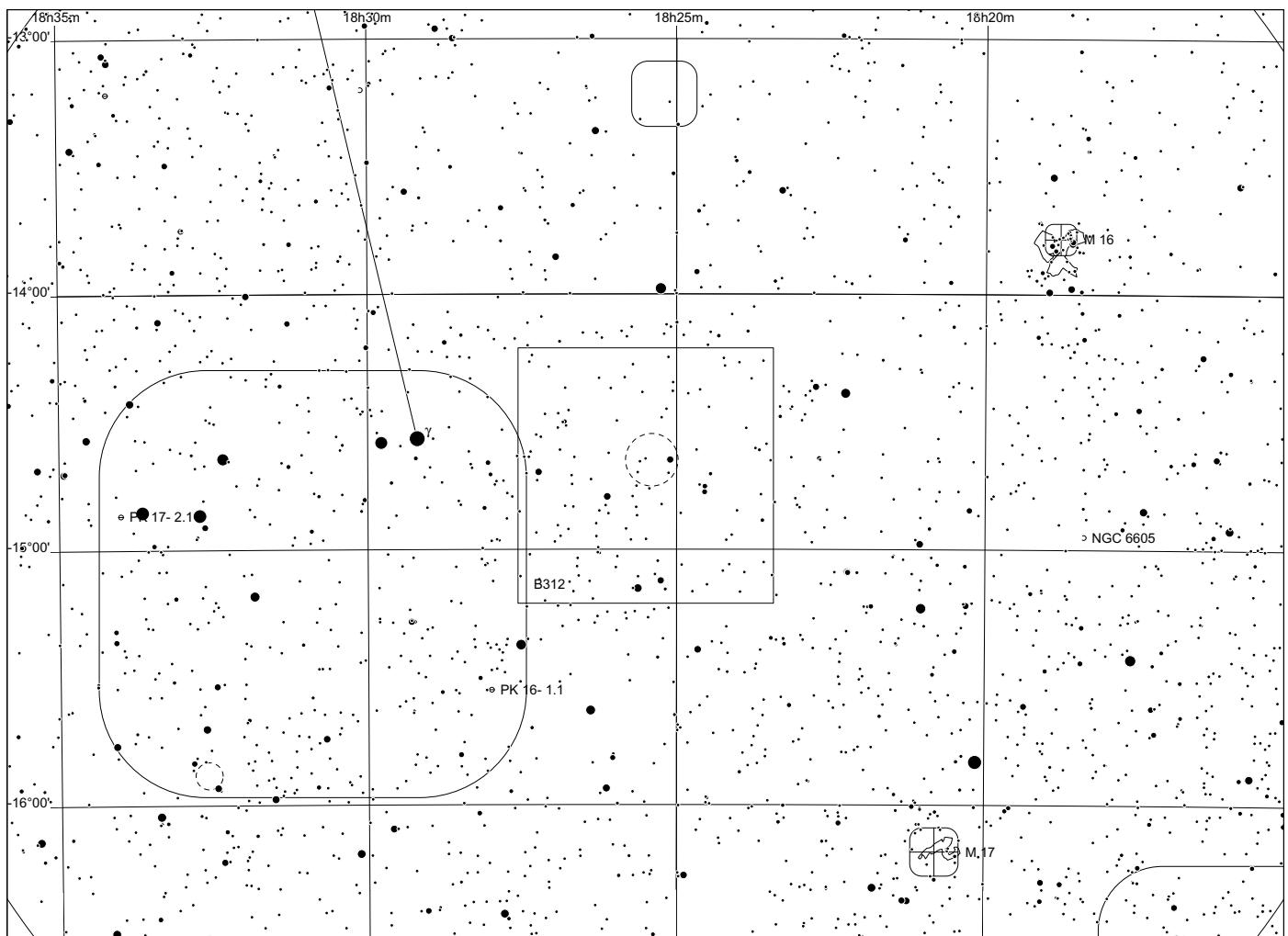
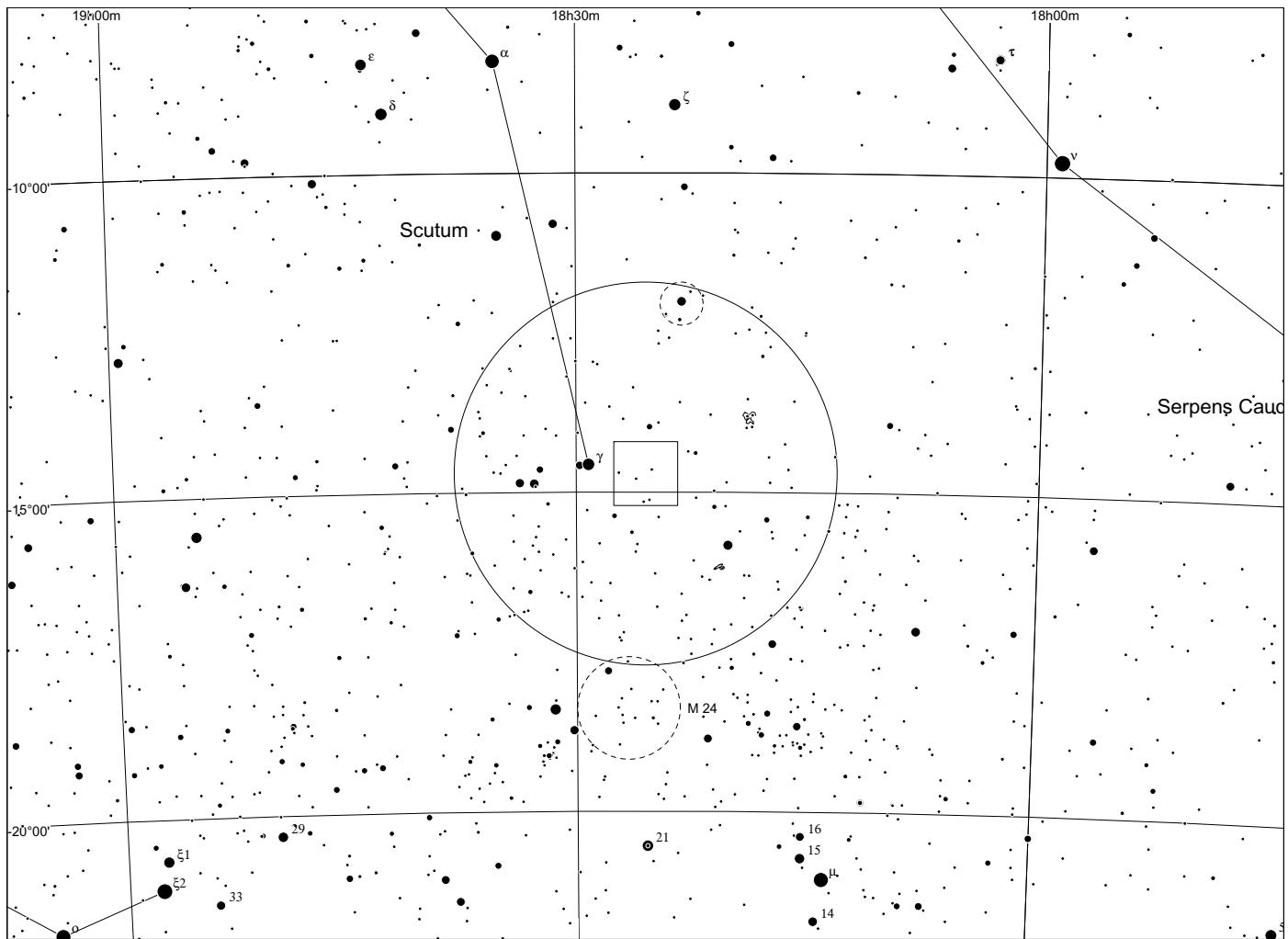
narrow band

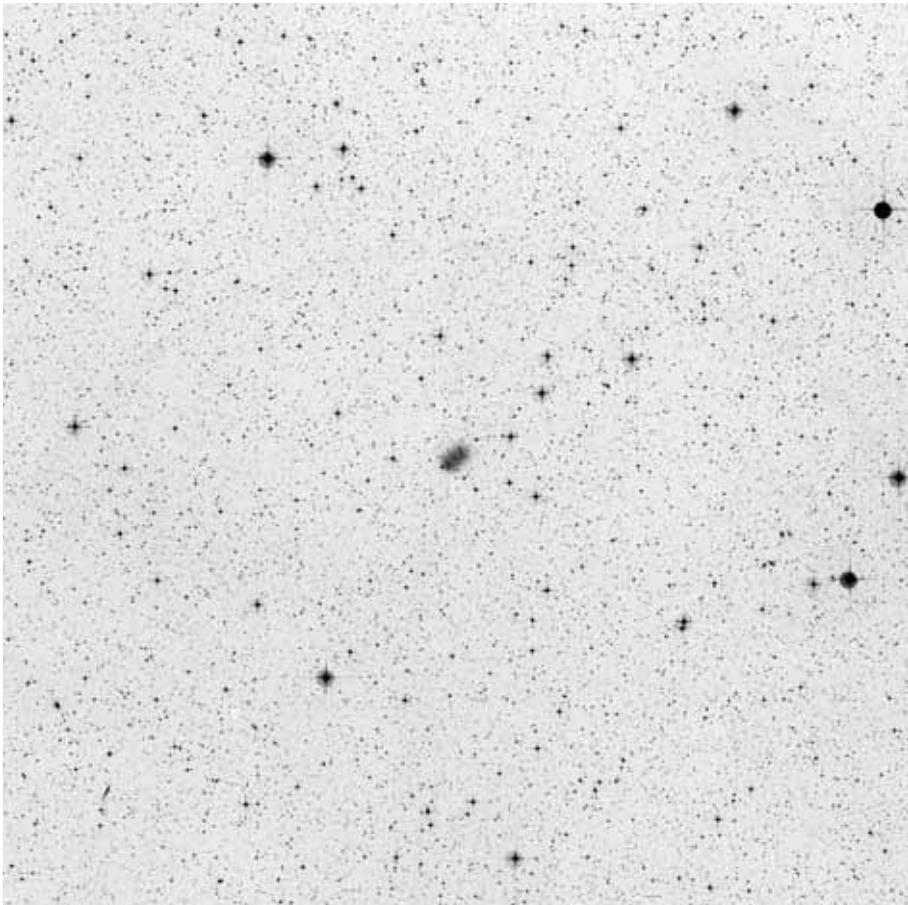
	other name	RA	dec	dia. '	F	S	B
Sh 2-050		18 25 30.2	-14 42 42	35	3	2	2

Distance: 1700 pc, Size: 17.3 pc, Source: 1982ApJS...49..183B

This may be associated with the Scutum supershell.

Observing notes:

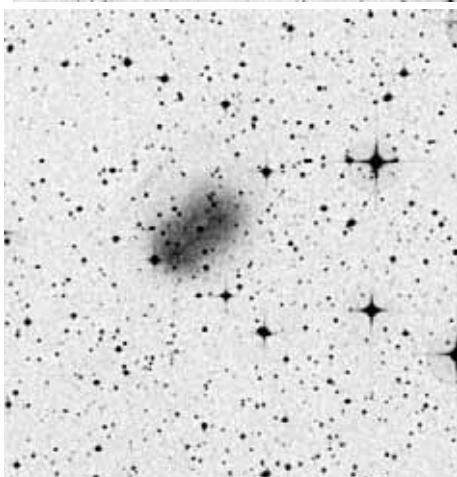




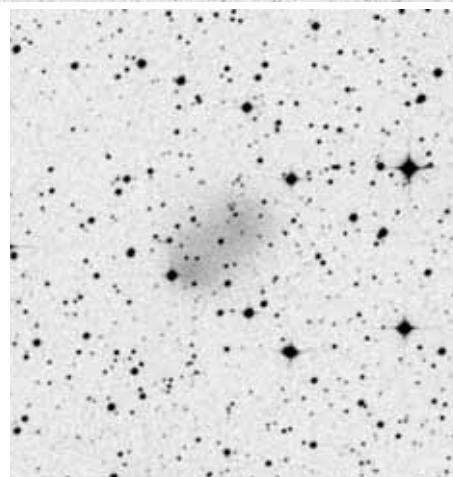
Sh 2 - 52

in Sagittarius

60x60, blue



POSS blue



POSS red



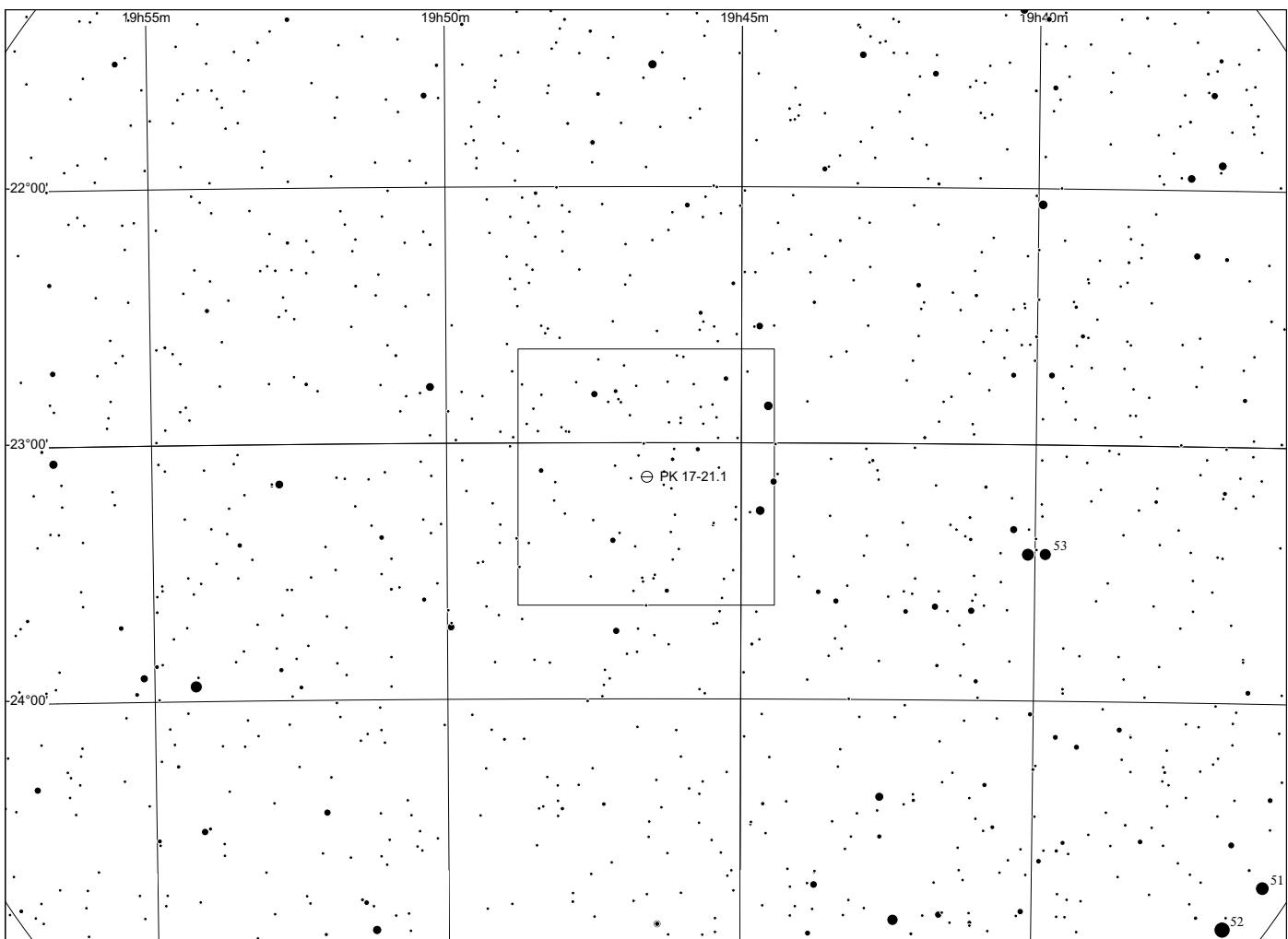
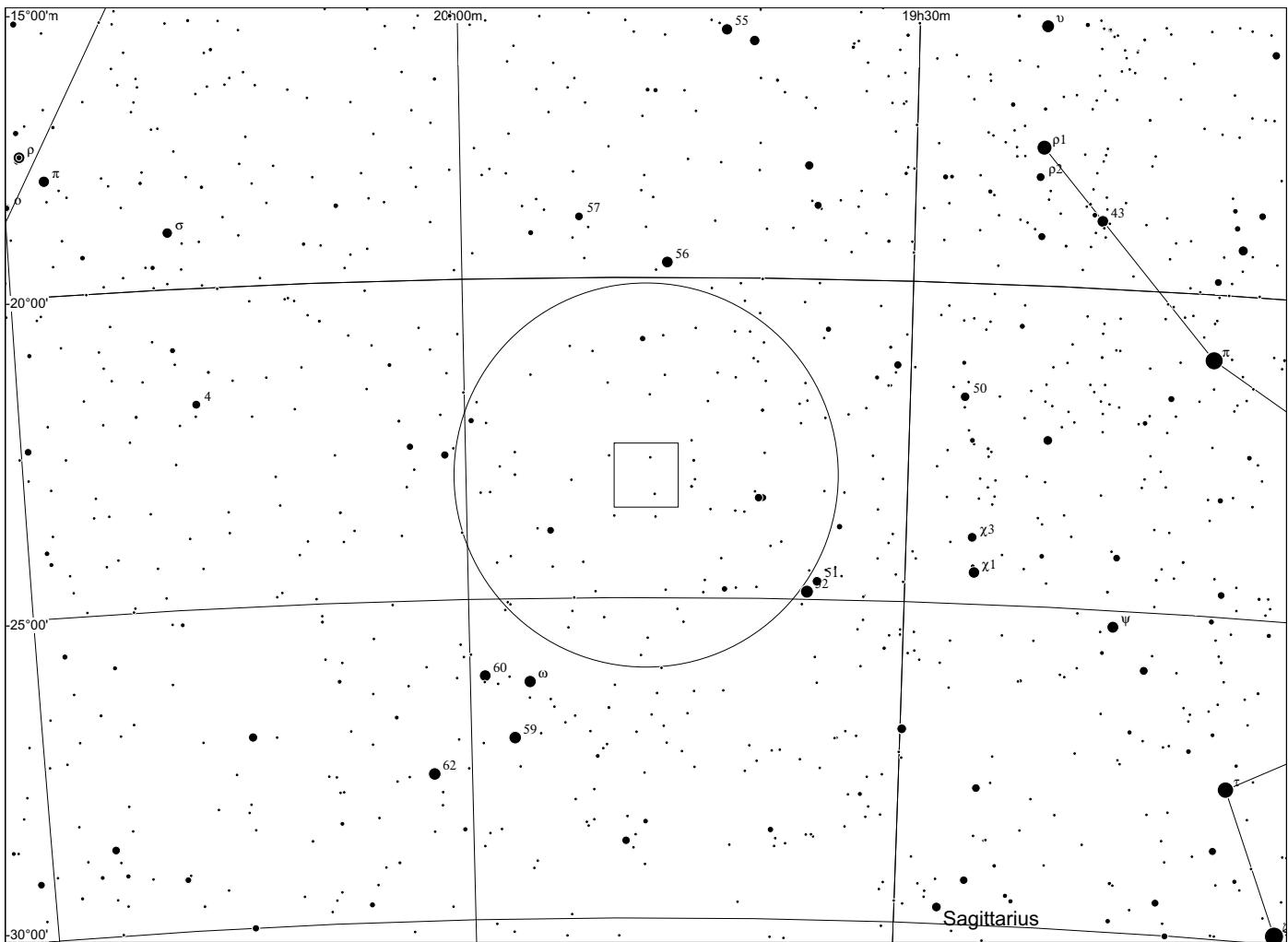
composite

	other name	RA	dec	dia.	F	S	B
Sh 2-052	PN Abell 65	19 47 46.3	-23 05 15	2	2	1	2

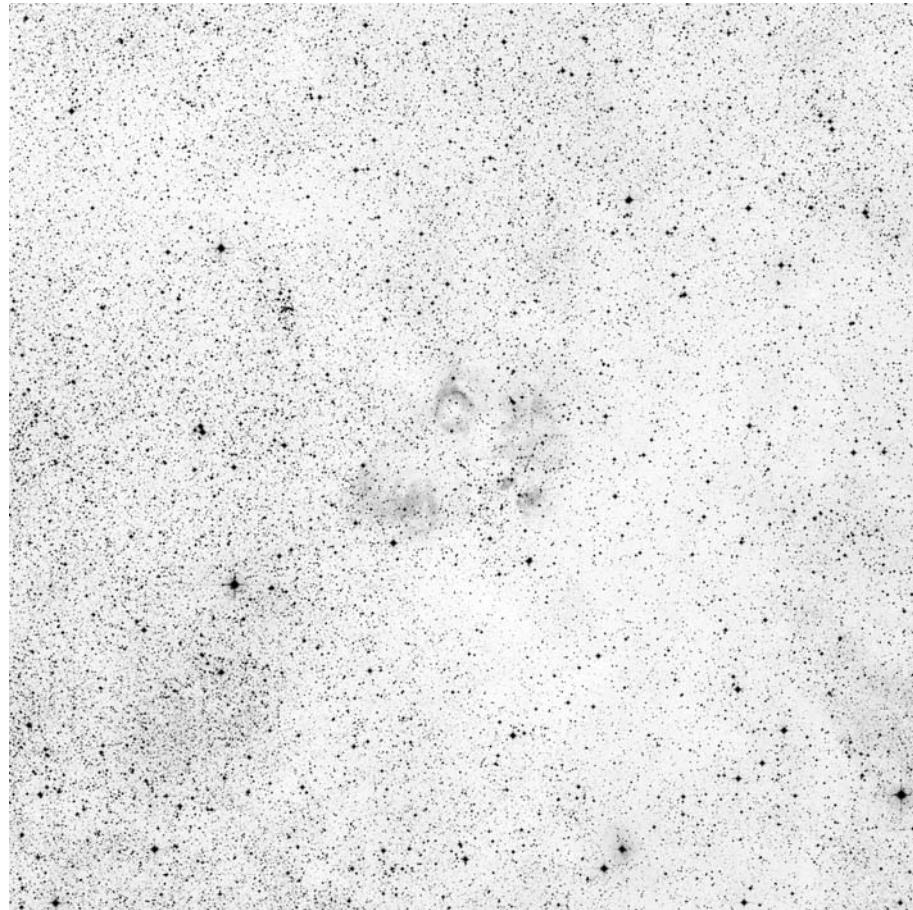
Distance: 1500 pc, Size: 0.9 pc, Source: 1996A&A...315..253W

The faint blue glow comes from the planetary nebula also known as Abell 65. It is highly unusual for a planetary nebula because it contains an eclipsing binary central star. See Sh 2-313 for another example of such a blue planetary nebula with a binary central star.

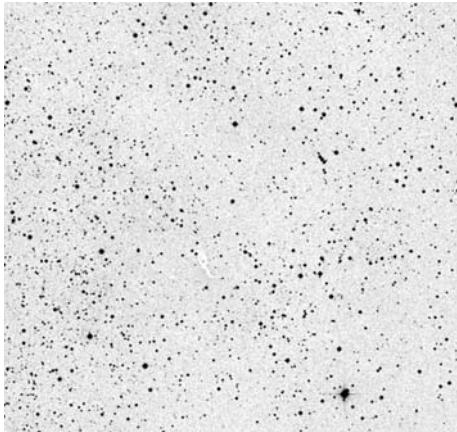
Observing notes:



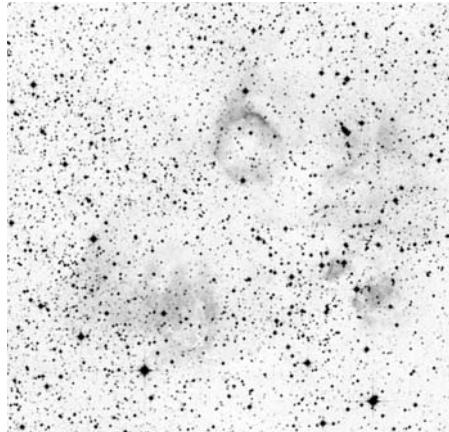
Sh 2 - 53
in Scutum



60x60, red



POSS blue



POSS red



RGB Dean Salman

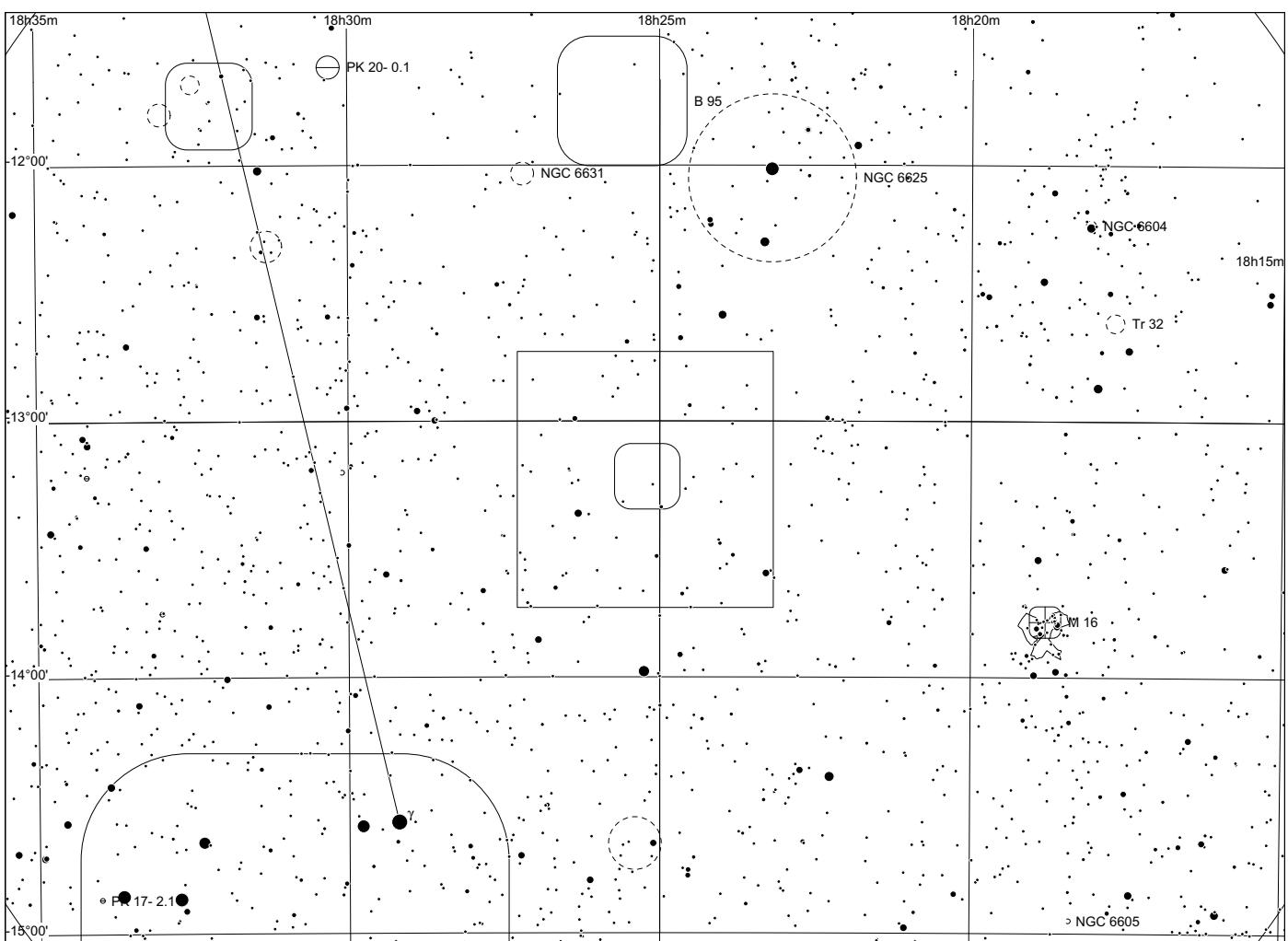
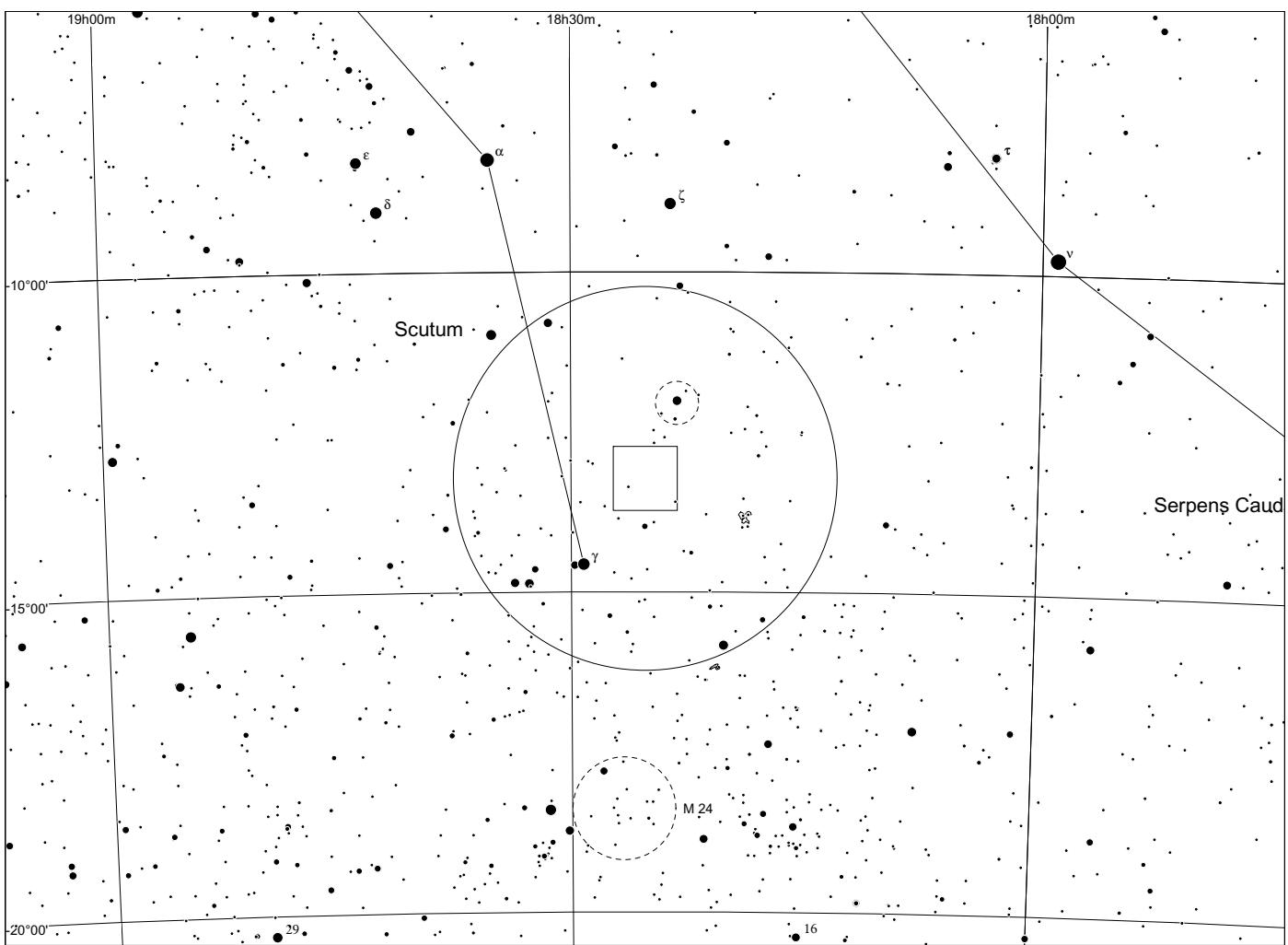
	other name	RA	dec	dia. '	F	S	B
Sh 2-053		18 25 14.4	-13 13 44	15	3	2	2

Also: RCW 166 (18.20° , -0.30°) Distance: 3798 pc, Size: 9.4 pc Source: 2003A&A...397..213P

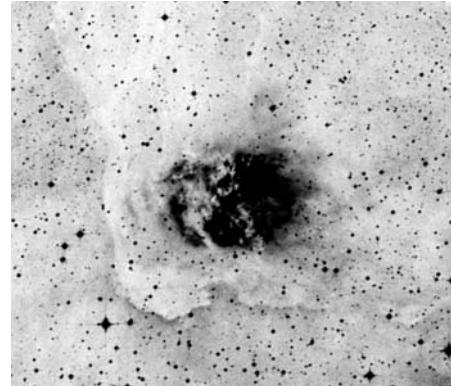
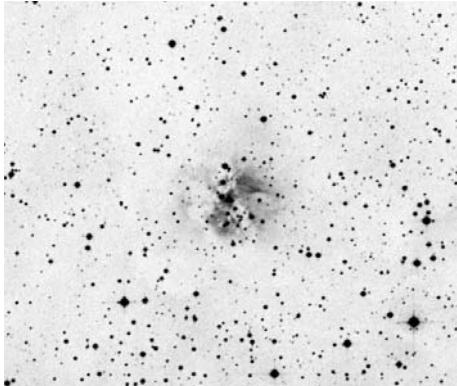
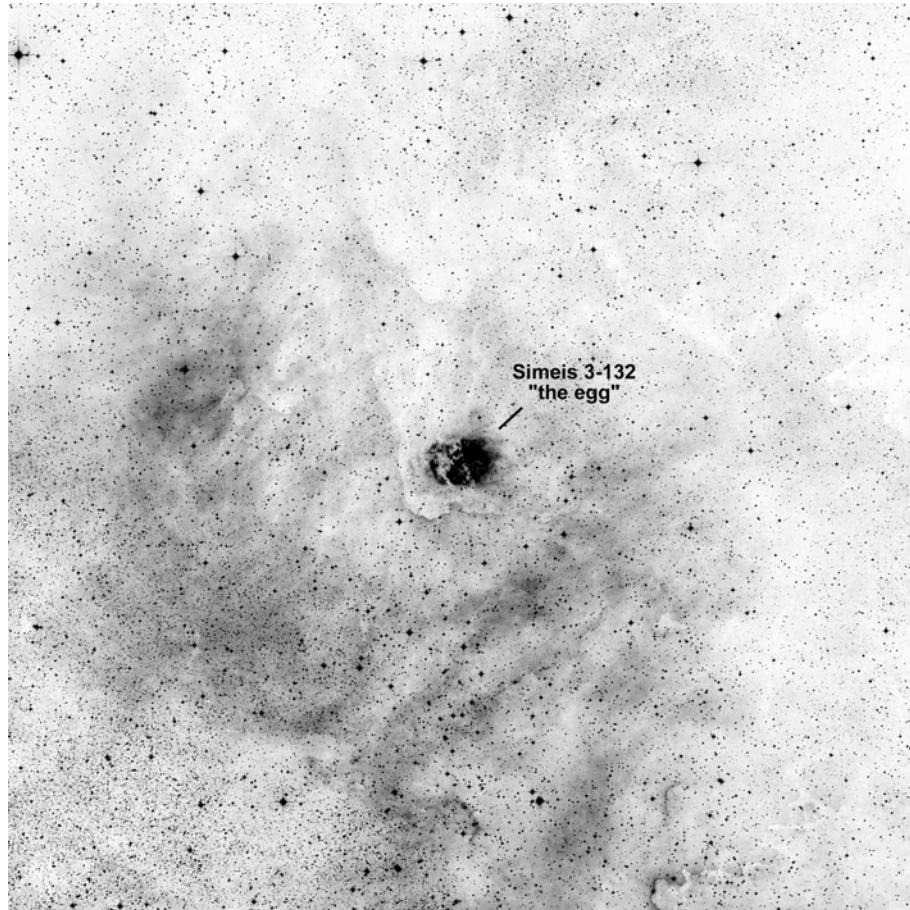
This is in the same area of sky as the Scutum supershell.

This nebula is mentioned in connection to gamma ray source 2EG J1825-1307, which is assigned a distance estimate of 4300 parsecs. SIMBAD identifies this gamma ray source with the pulsar PWN G18.0-0.7 and the supernova remnant SNR 018.0-00.7.

Observing notes:



Sh 2 - 54 in Serpens



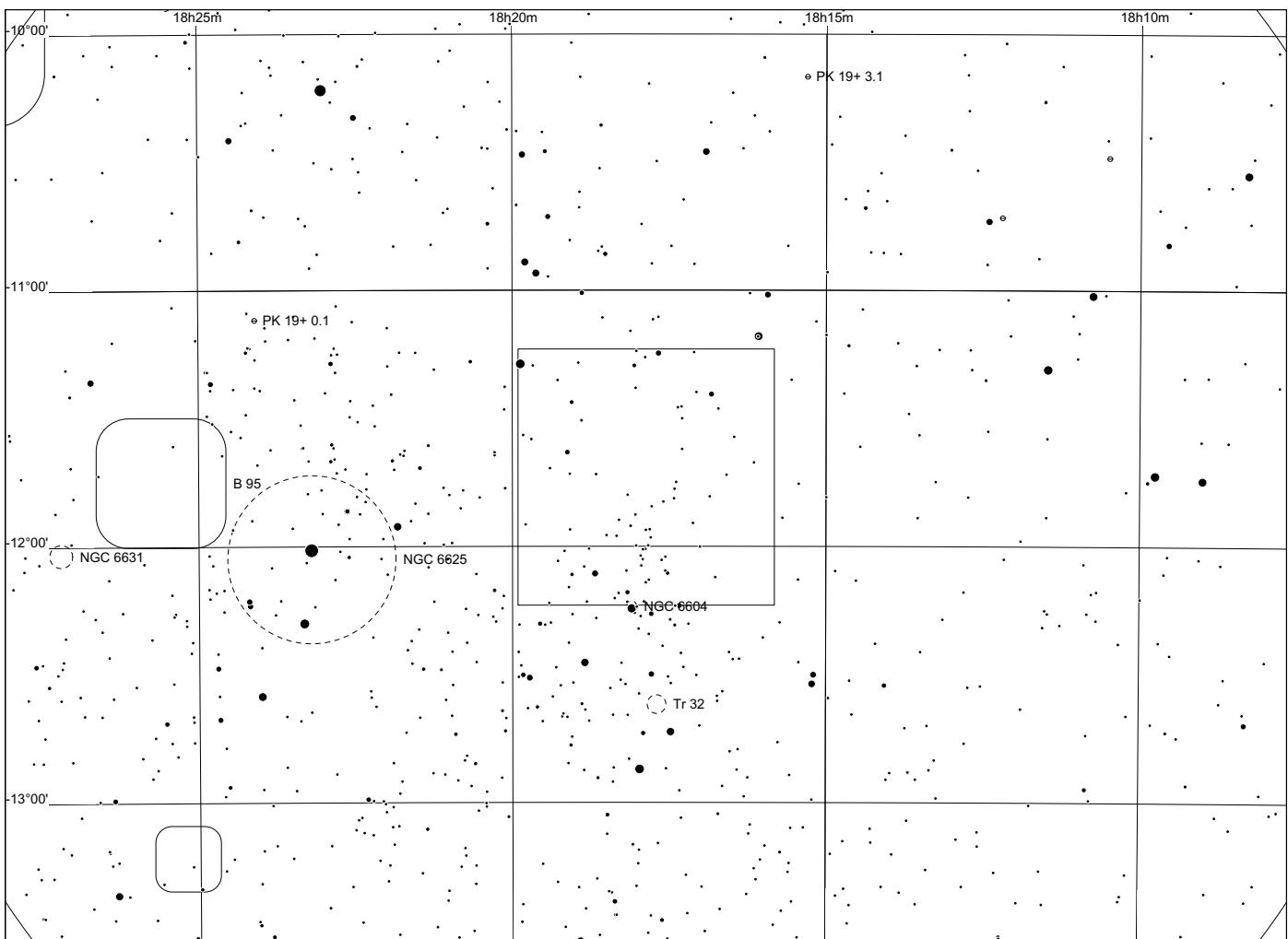
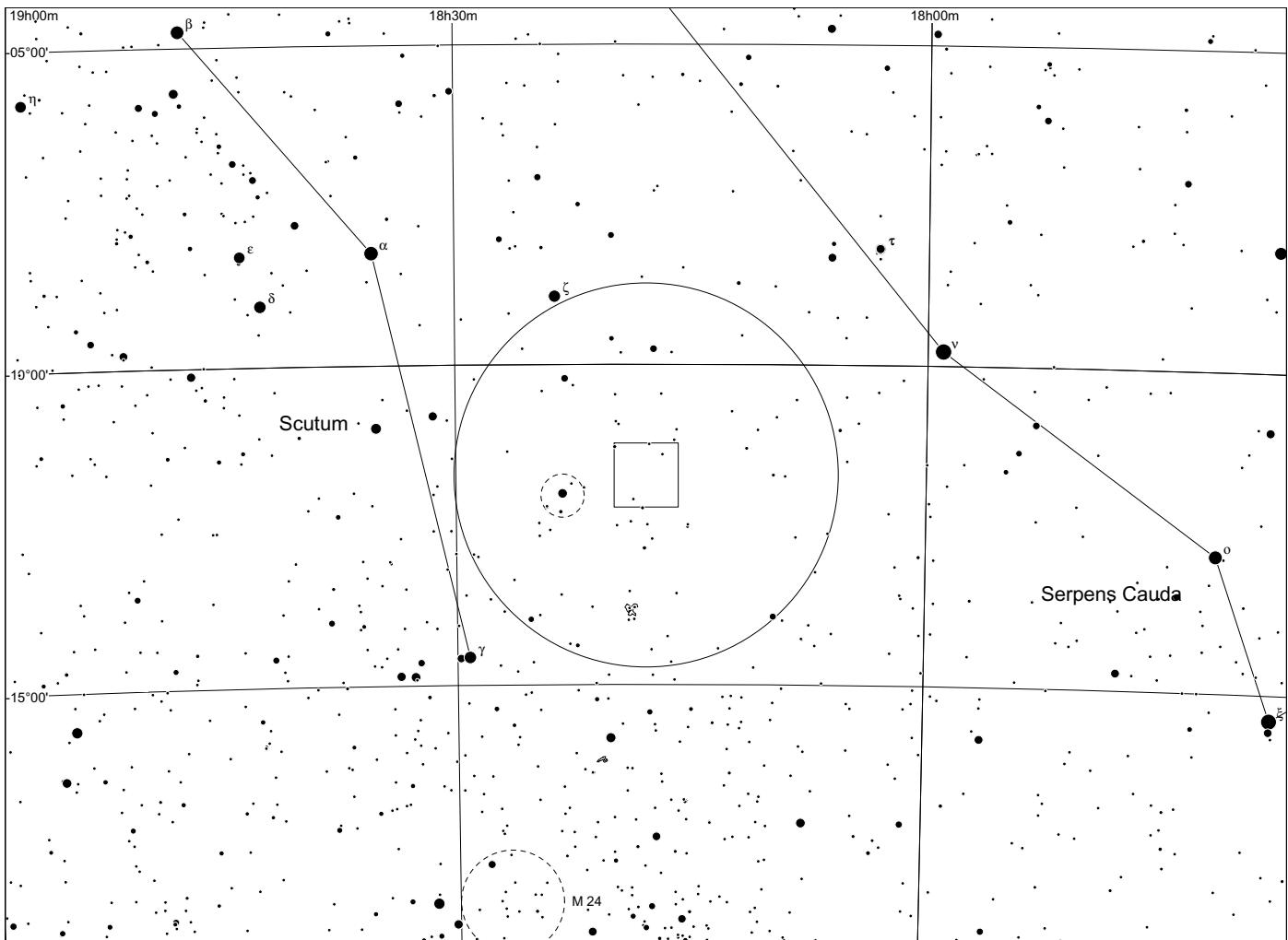
	other name	RA	dec	dia. '	F	S	B
Sh 2-054	Contains NGC6604	18 17 52.6	-11 43 48	140	3	3	3

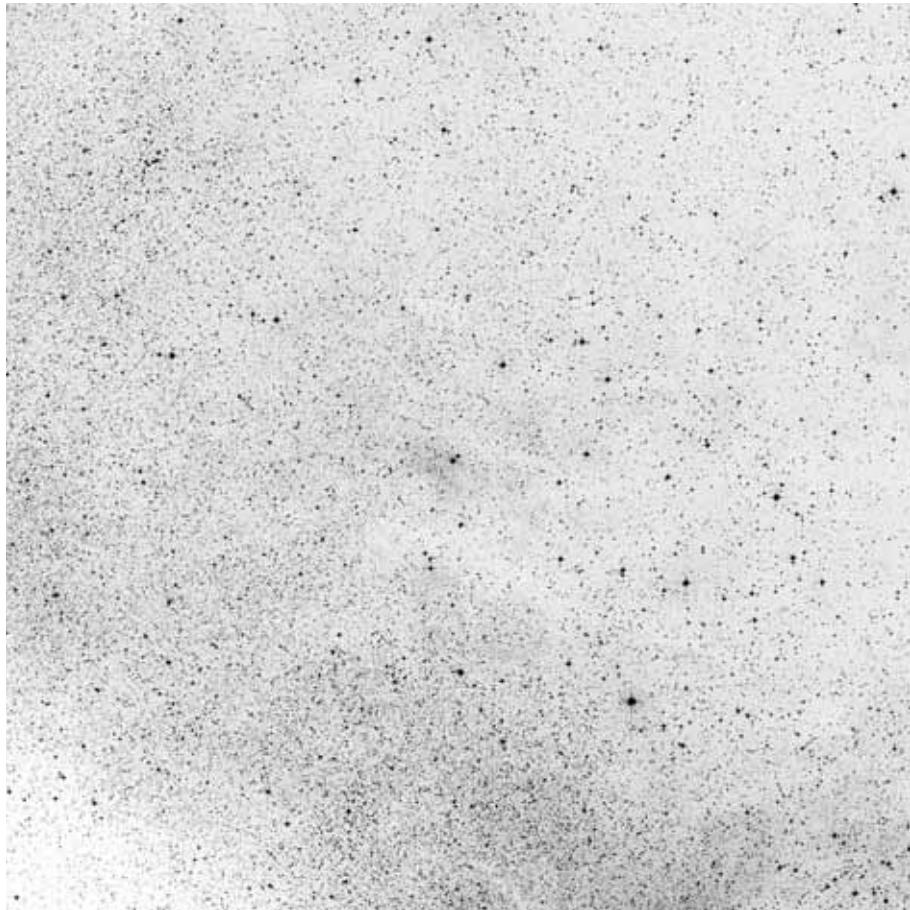
Also: Gum 85 (18.70°, 2.00°) Distance: 1900 pc, Size: 10.8 pc Source: 2000AJ....120.2594F

This HII region is associated with the Serpens OB2 association and the NGC 6604 star cluster and is the core of the W35 star formation region. It lies, unusually, about 70 parsecs above the galactic plane. Serpens OB2 contains over 100 OB stars with a common age of about 5 million years.

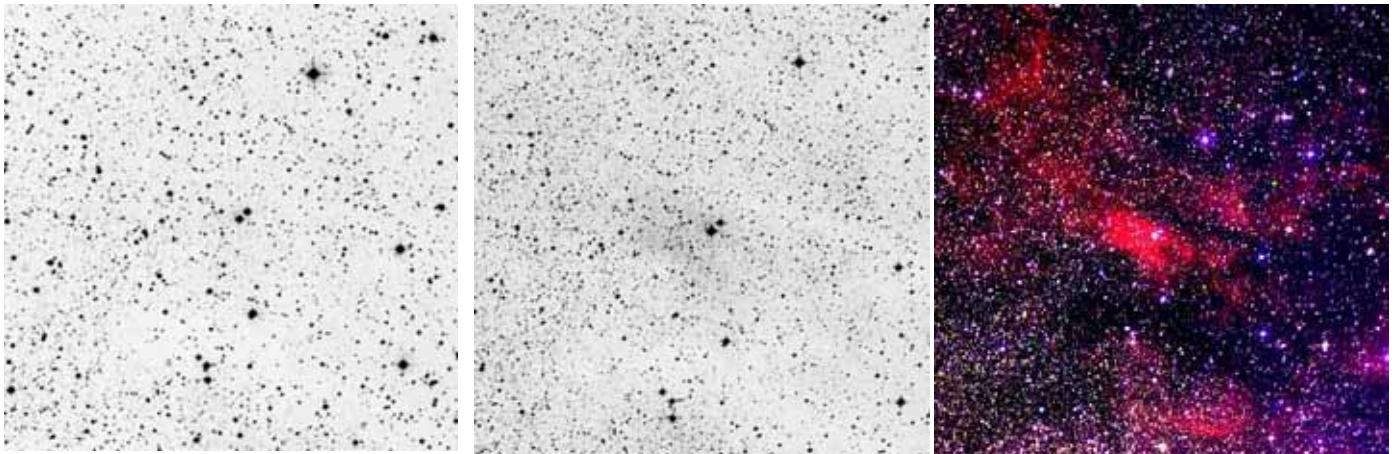
Sharpless describes a large region, so this nebula would be the large nebula, not just the small bright one within. A good image of this nebula, which looks like a nest carrying a tiny egg, can been seen here. NGC 6604 lies towards the bottom of Sh 2-54. It is not clear from the scientific literature what is causing the remarkably intense glow of the "egg".

Observing notes:





**Sh 2 - 55
in Scutum**

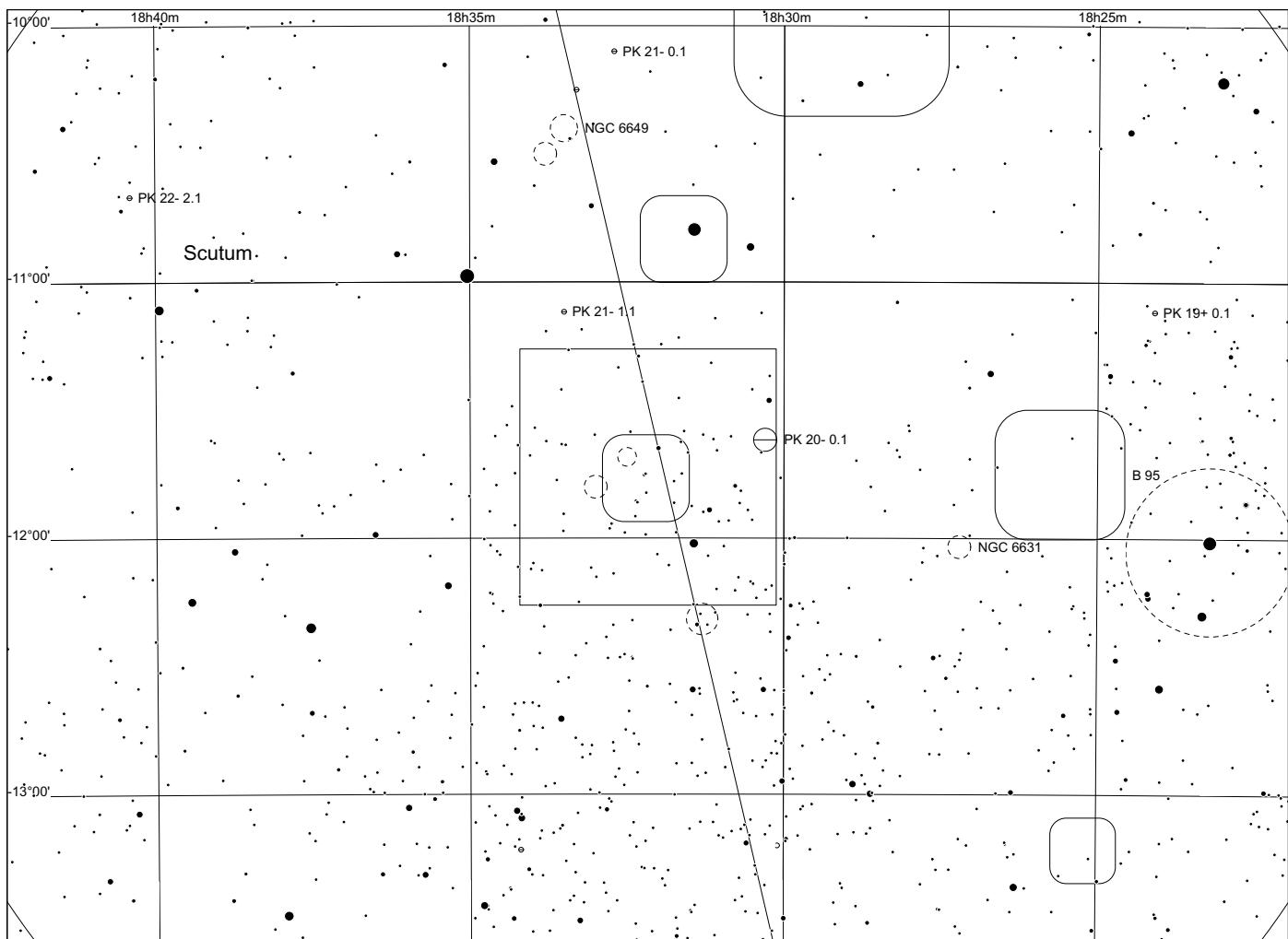
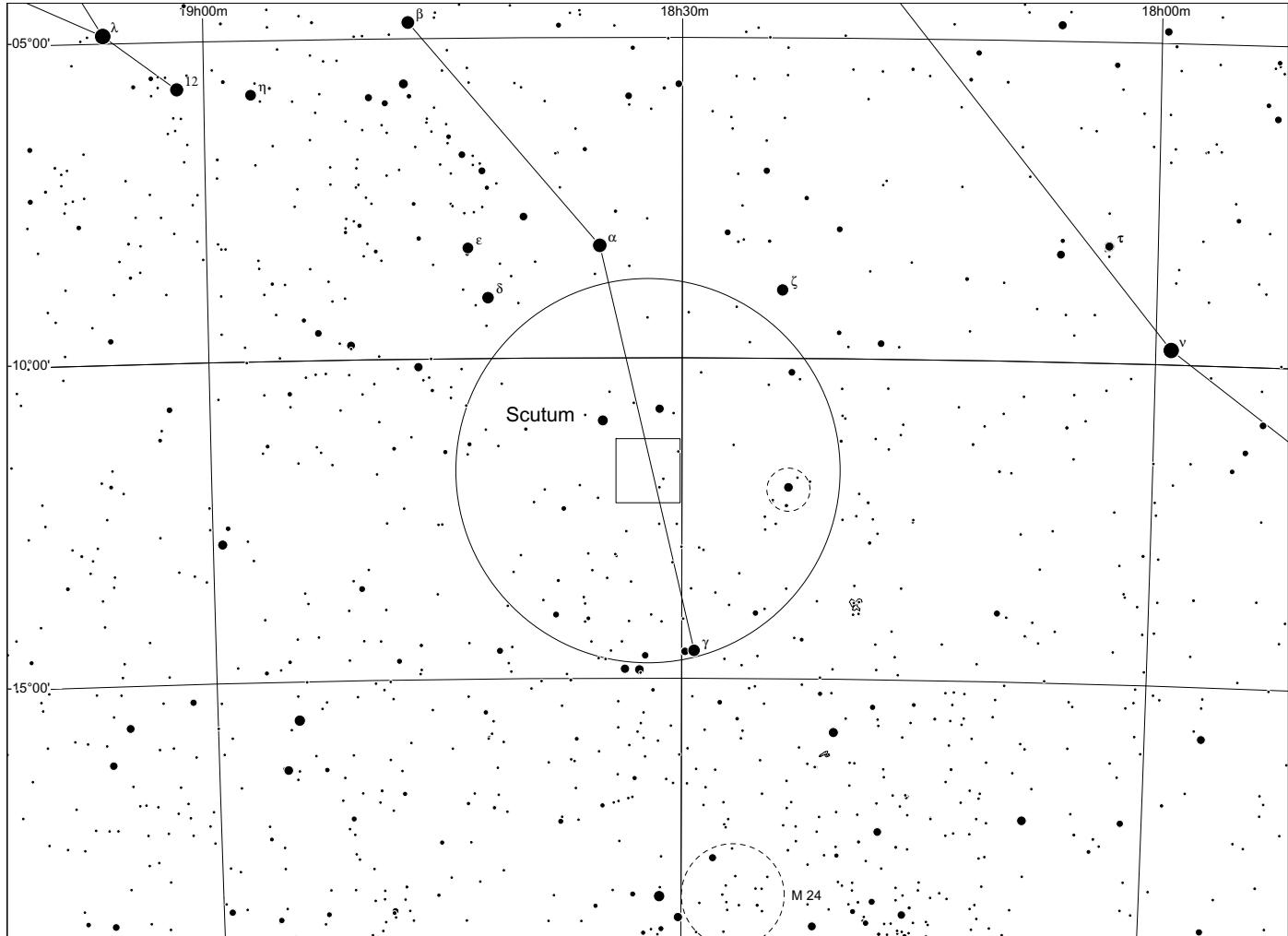


	other name	RA	dec	dia. '	F	S	B
Sh 2-055		18 32 10.5	-11 45 44	5	3	2	1

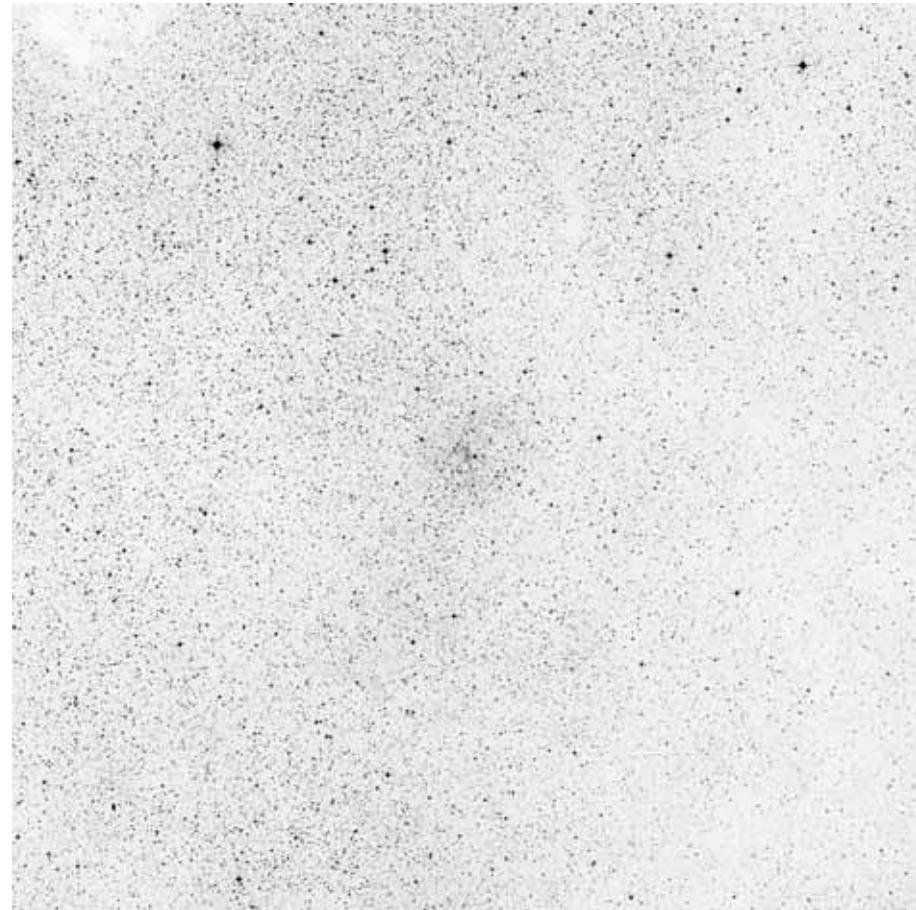
Distance: 3300 pc, Size: 4.8 pc Source: 2003A&A...397..133R

This HII region, also called LBN 73, may be part of the Scutum supershell. The dark nebula immediately below Sh 2-55 is LDN 412. Sh 2-55 is near a large nebular region in hydrogen-alpha that appears to mark the main boundary of the Scutum Supershell.

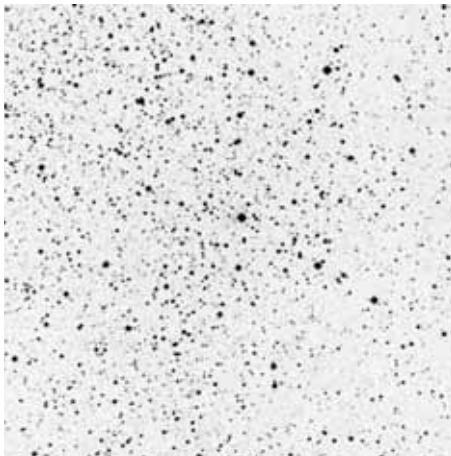
Observing notes:



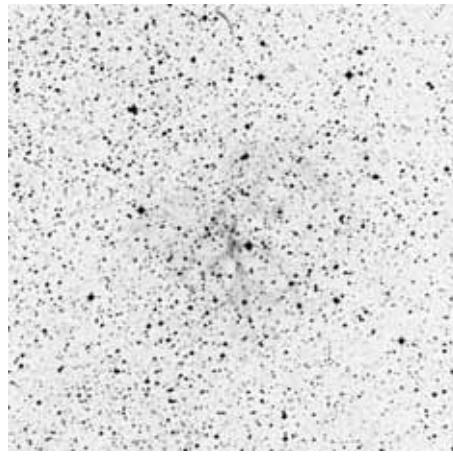
Sh 2 - 56
in Scutum



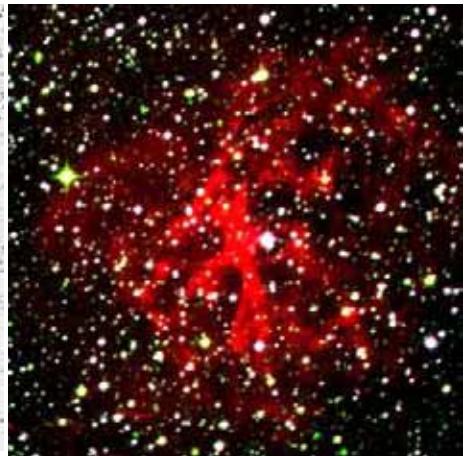
60x60, red



POSS blue



POSS red



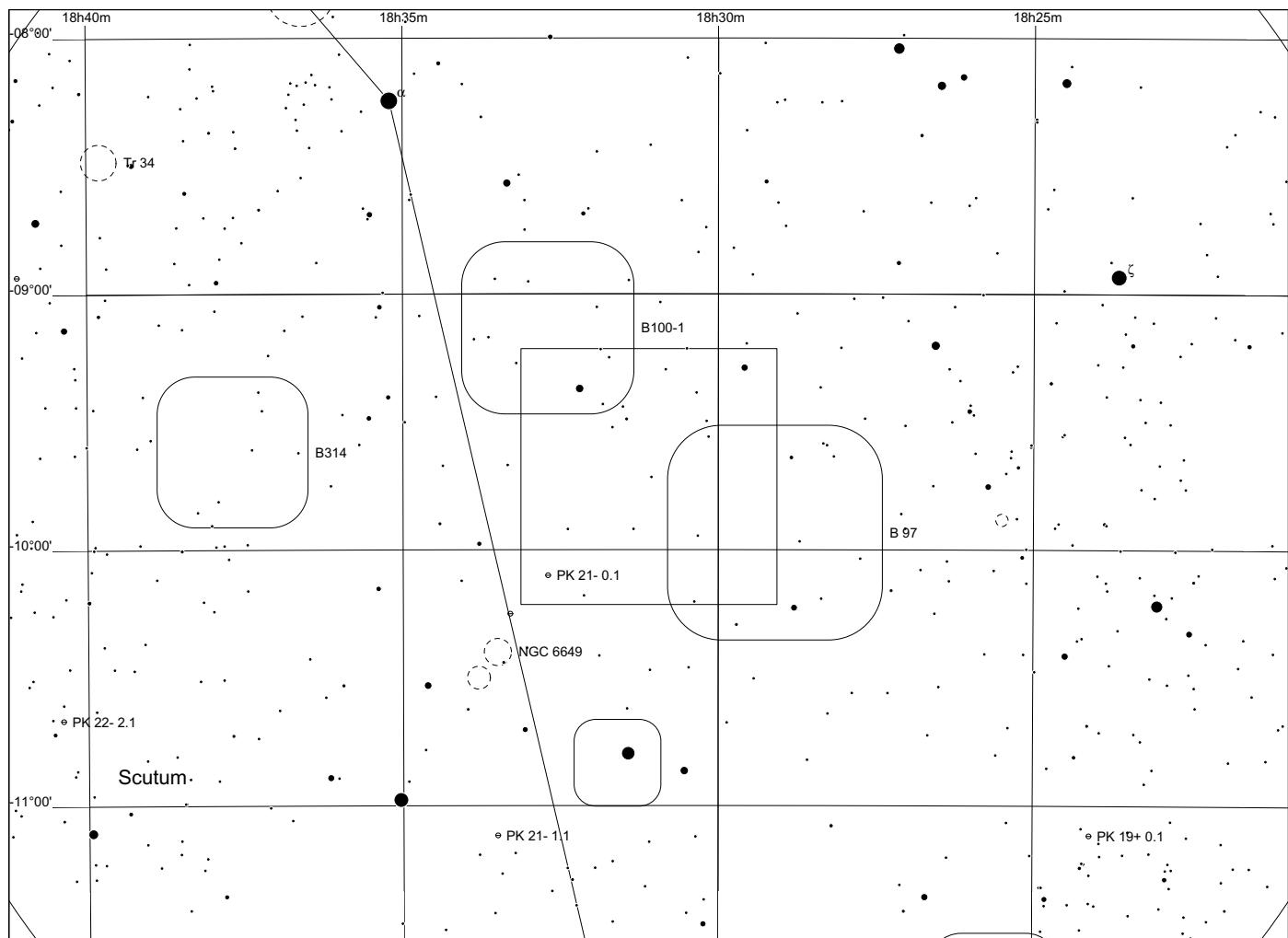
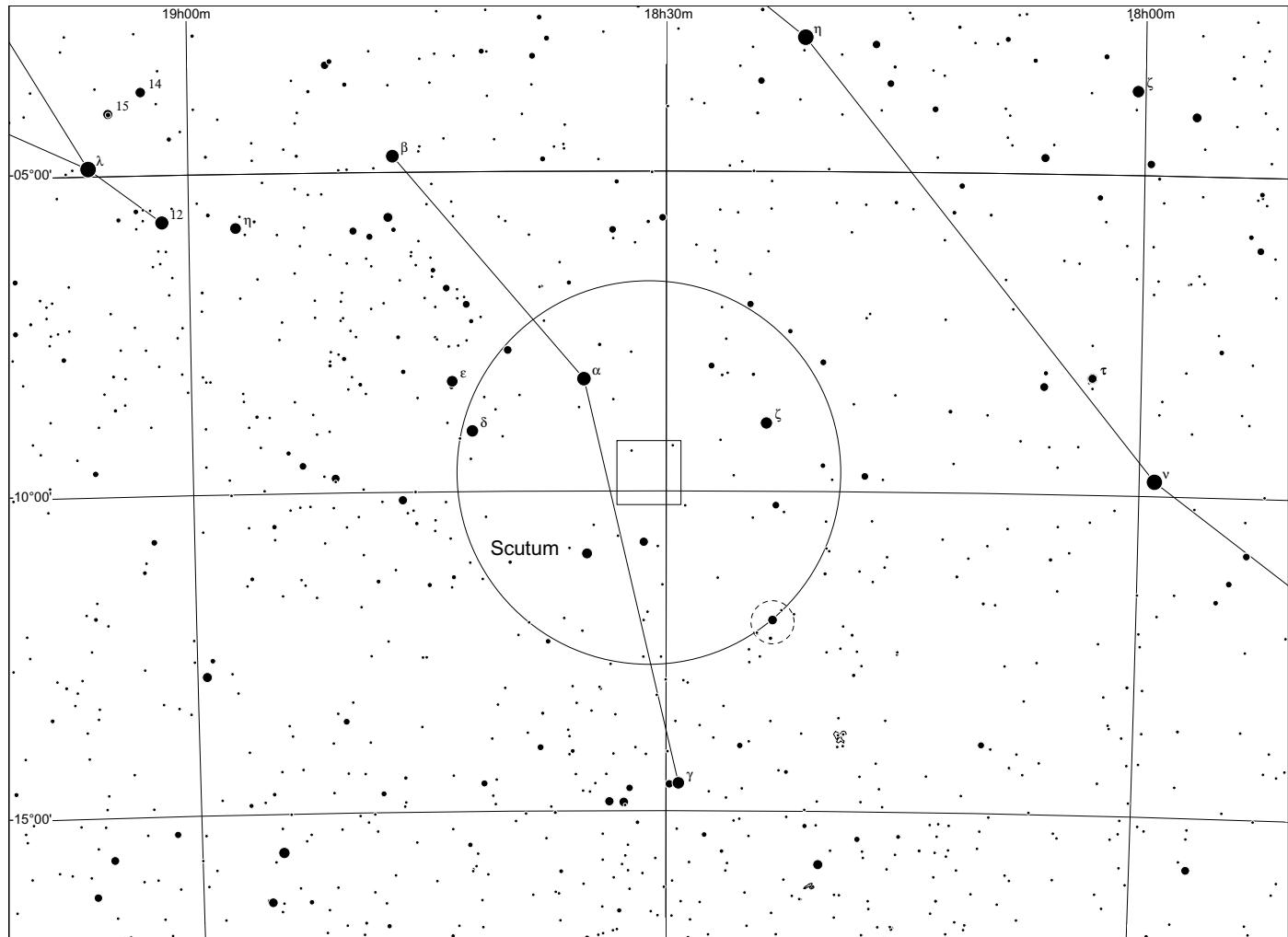
composite

	other name	RA	dec	dia. '	F	S	B
Sh 2-056		18 31 06.1	-09 42 52	7	1	2	1

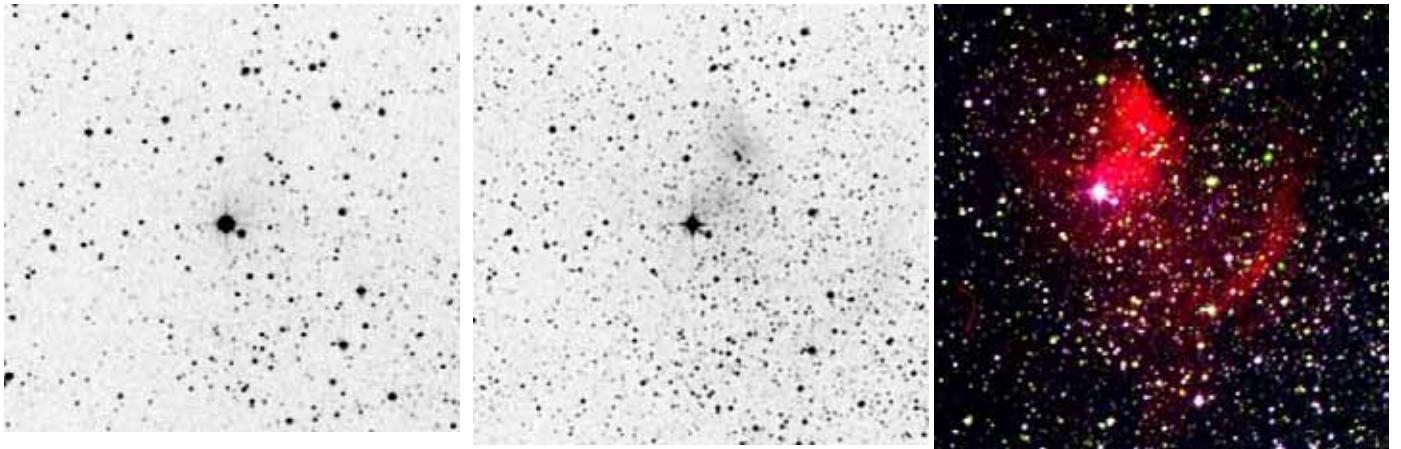
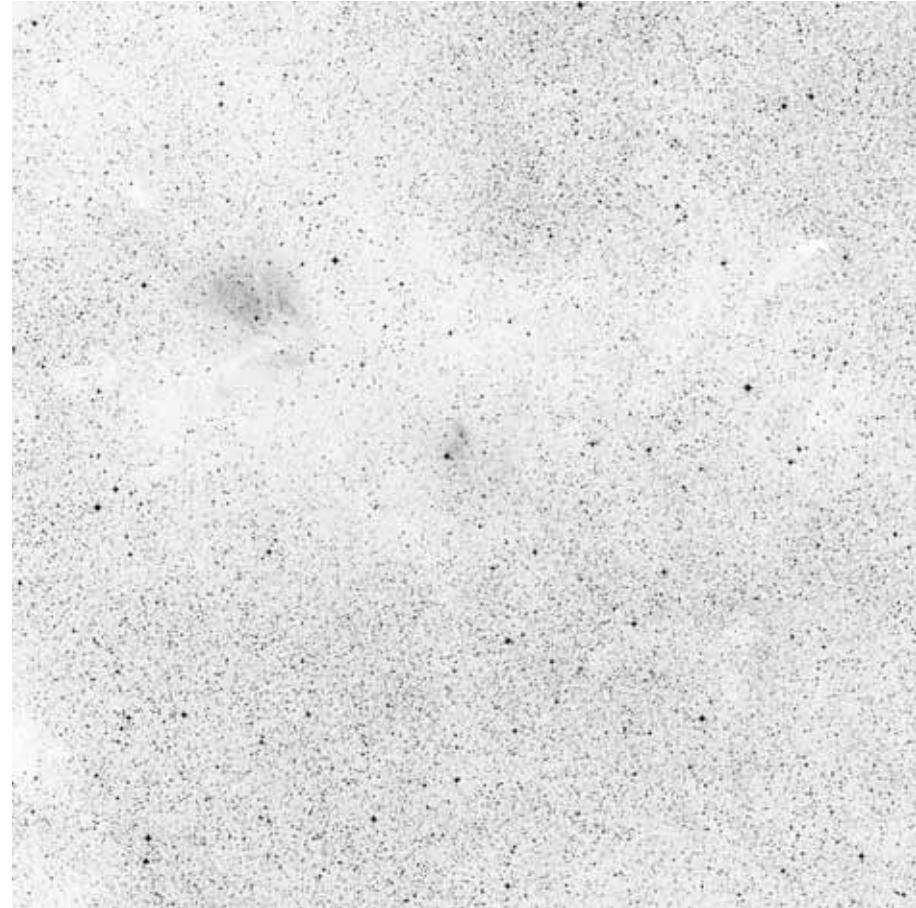
Also: RCW 169 (21.97° , 0.06°) Distance: 4800 pc, Size: 9.8 pc Source: 2003A&A...397..133R

This HII region is the luminous water maser GAL 021.88+00.02

Observing notes:



**Sh 2 - 57
in Scutum**



POSS blue

POSS red

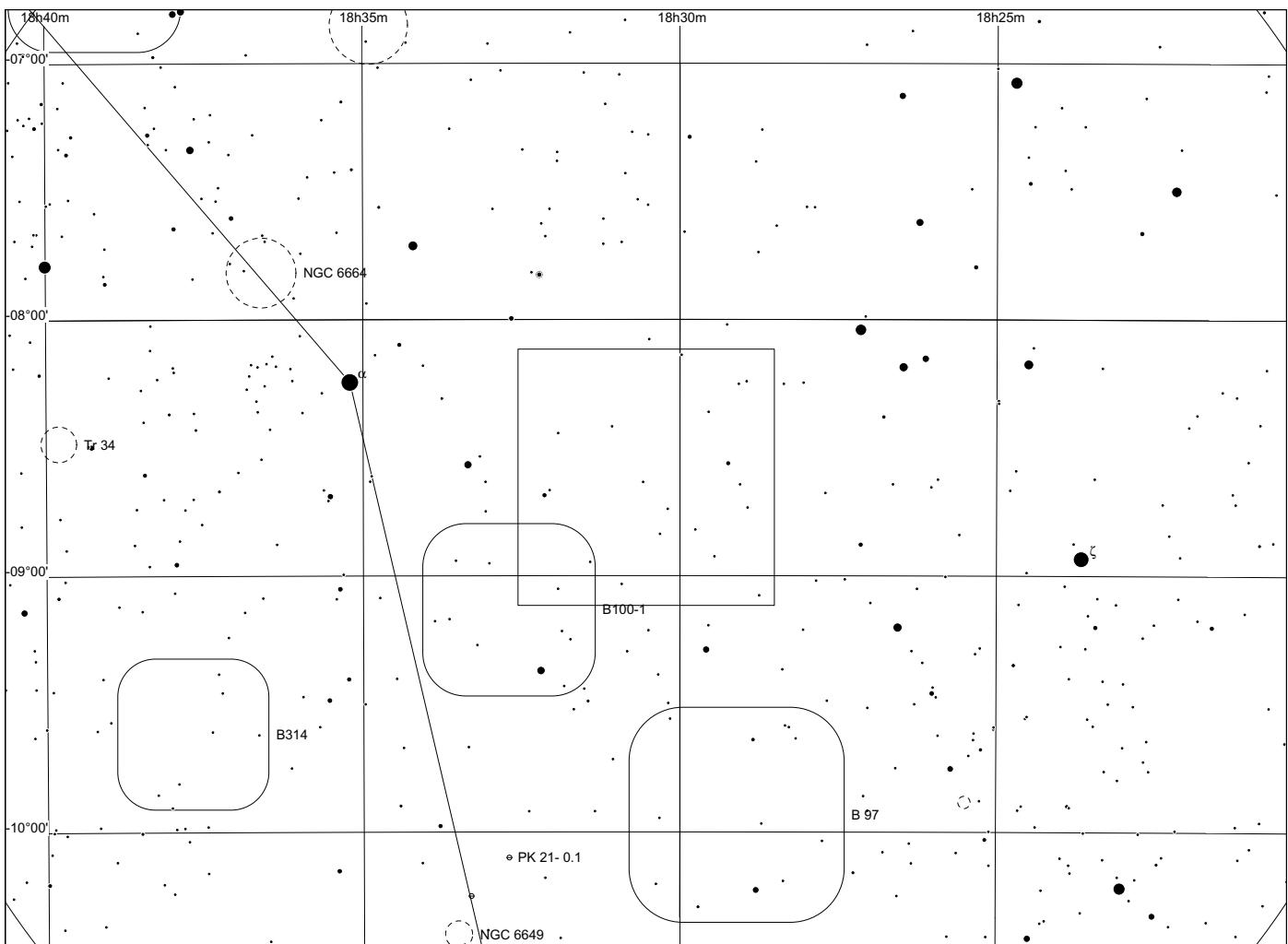
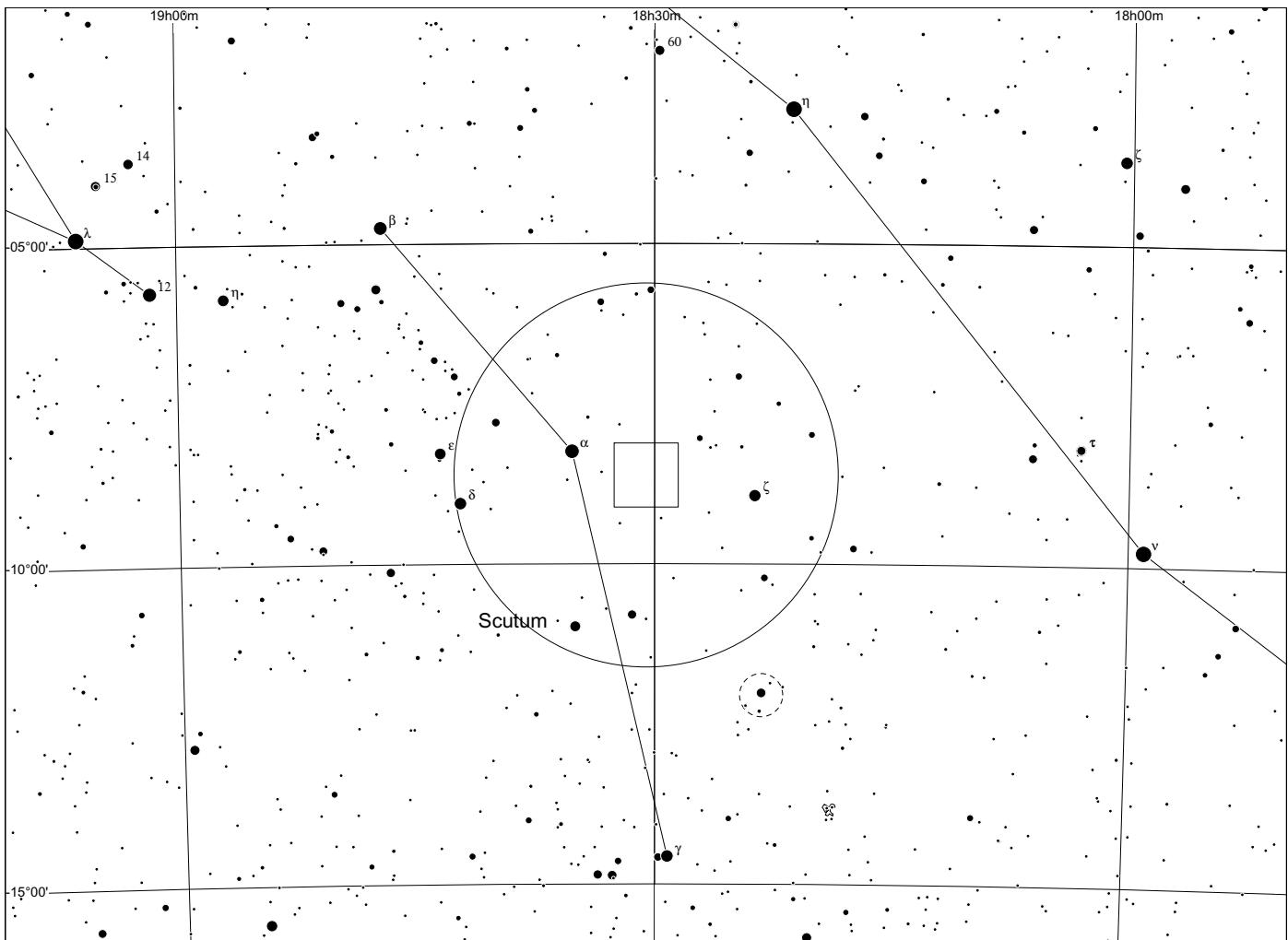
composite

	other name	RA	dec	dia. '	F	S	B
Sh 2-057		18 30 32.8	-08 36 58	2	3	2	1

(22.89°, 0.68°) Distance: 1500 pc, Size: 0.9 pc Source: 1982ApJS...49..183B

Sh 2-57 and Sh 2-58 are visible together in the sky (as shown by this hydrogen-alpha image), divided by the dark nebula LDN 446 and just east of the Scutum Supershell. However, they seem to be located at quite different distances, with Sh 2-58 at about the same distance as the Supershell and Sh 2-57 in front of this region.

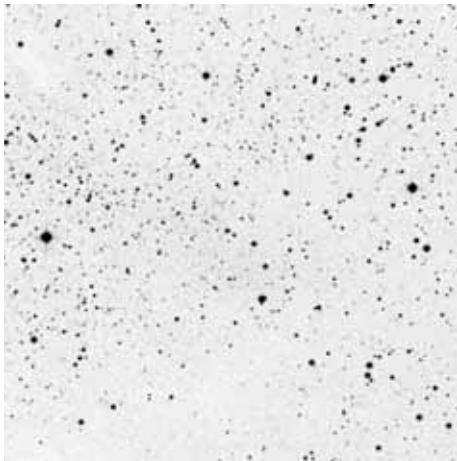
Observing notes:



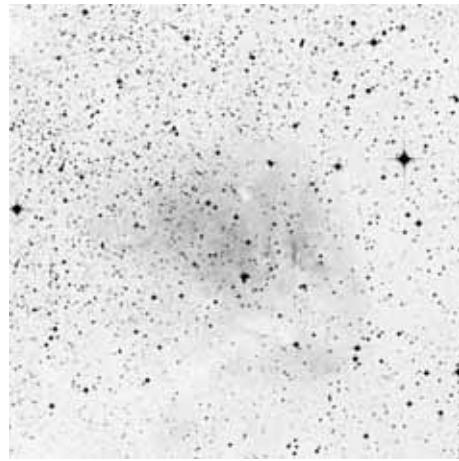


**Sh 2 - 58
in Scutum**

60x60, red



POSS blue



POSS red



composite

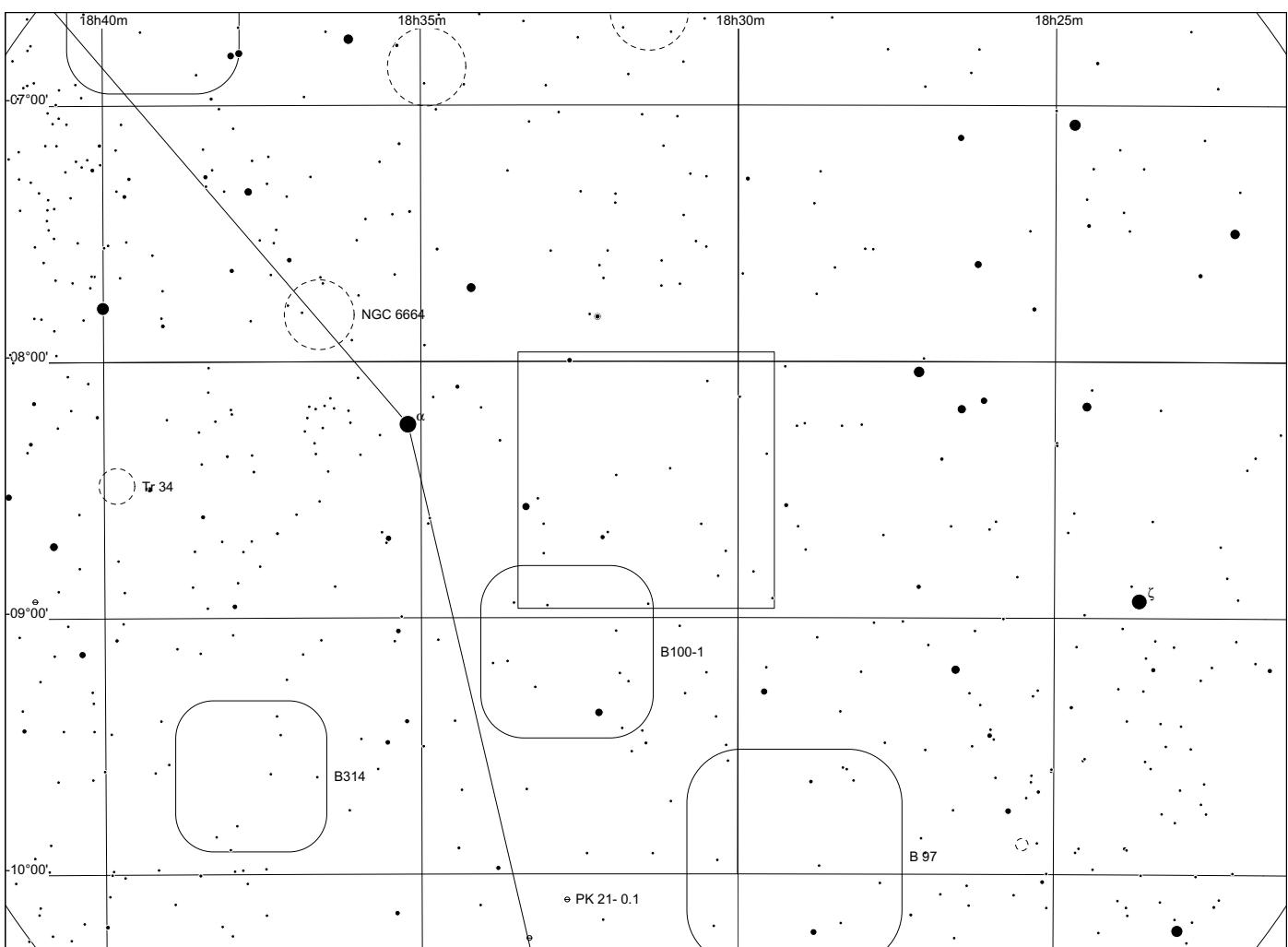
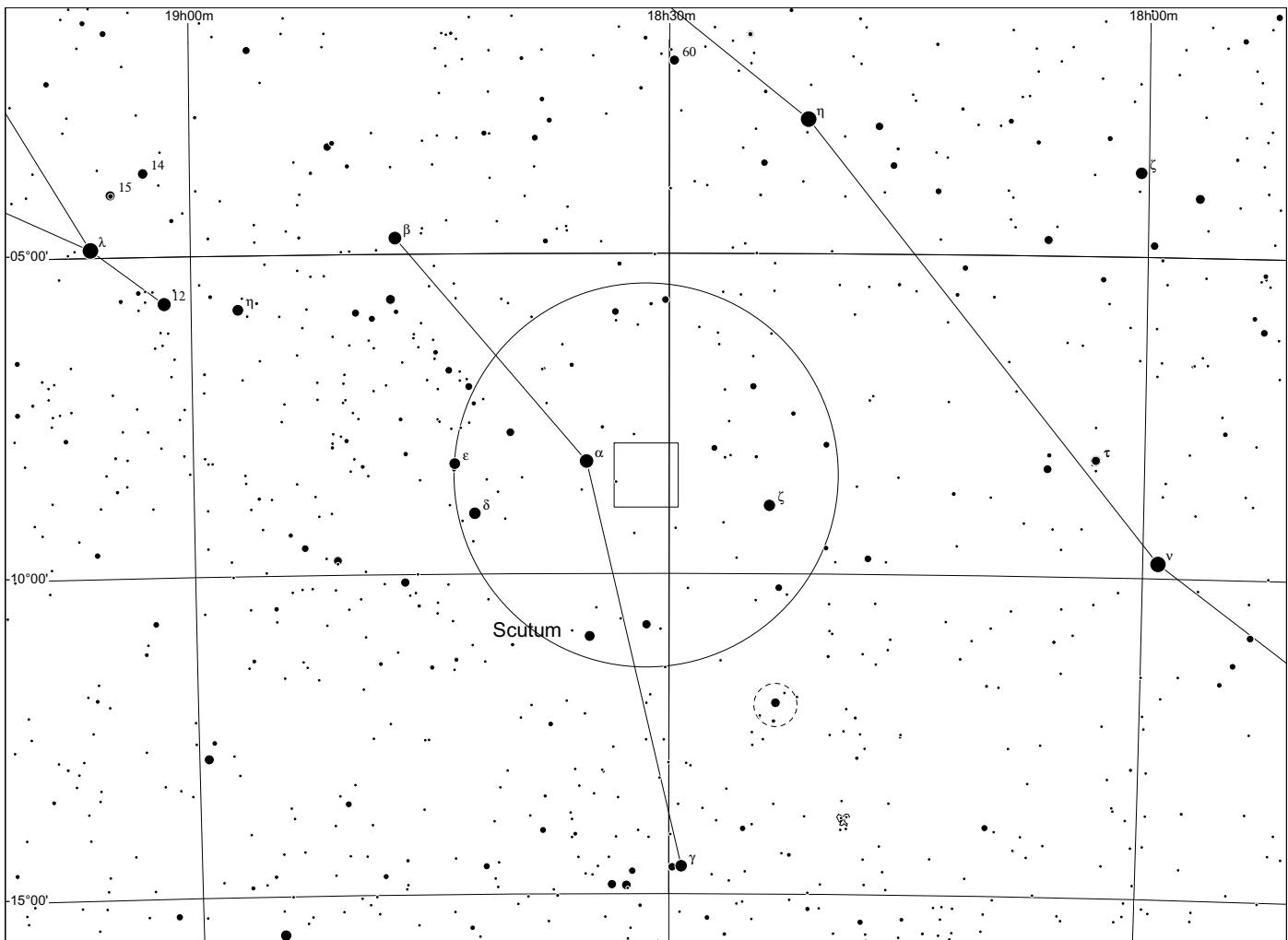
	other name	RA	dec	dia. '	F	S	B
Sh 2-058		18 31 26.6	-08 27 50	8	3	2	2

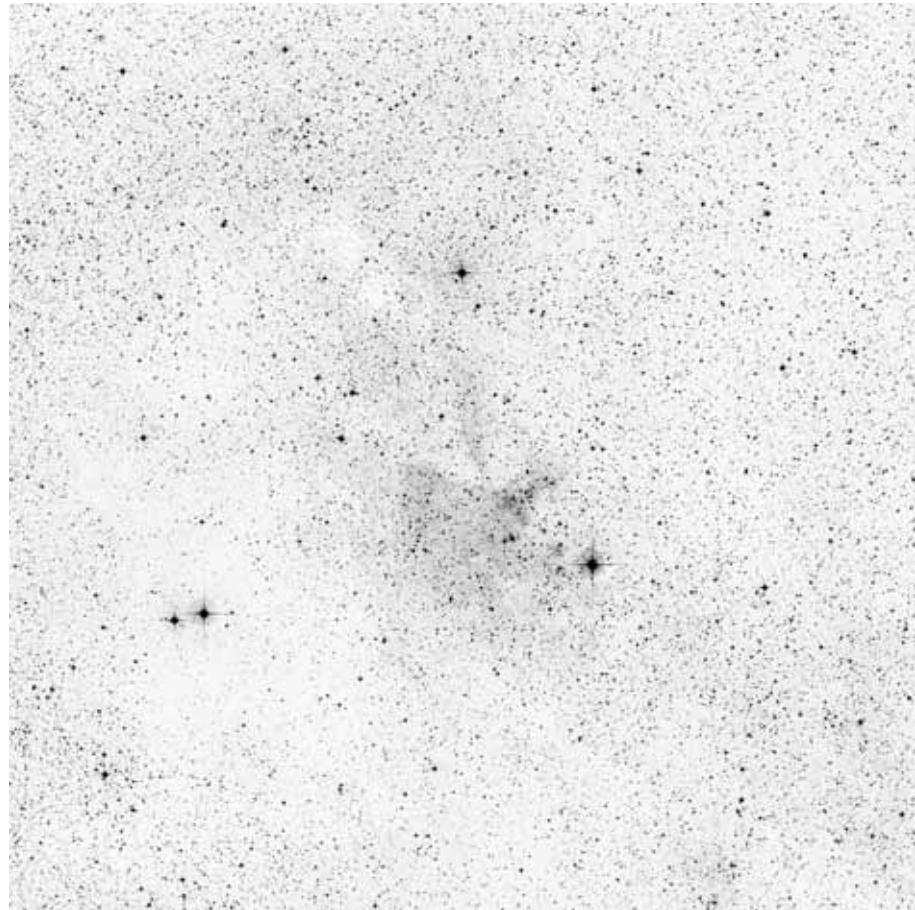
Also: RCW 171 (23.10°, 0.60°) Distance: 2472 pc, Size: 2.7 pc Source: 2003A&A...397..213P

Sh 2-57 and Sh 2-58 are visible together in the sky (as shown by this hydrogen-alpha image), divided by the dark nebula LDN 446 and just east of the Scutum Supershell. However, they seem to be located at quite different distances, with Sh 2-58 at about the same distance as the Supershell and Sh 2-57 in front of this region.

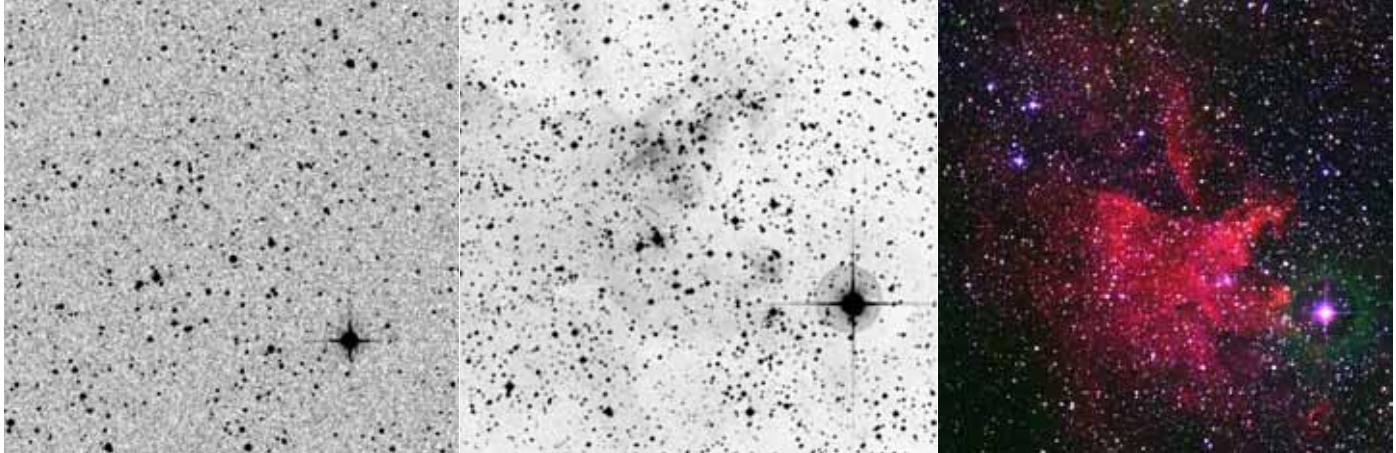
Sh 2-58 is close in the sky to the supernova remnant W41, which is estimated to have a distance of about 4000 pc.

Observing notes:





**Sh 2 - 60
in Scutum**



	other name	RA	dec	dia. '	F	S	B
Sh 2-060		18 36 40.5	-06 42 04	20	3	2	2

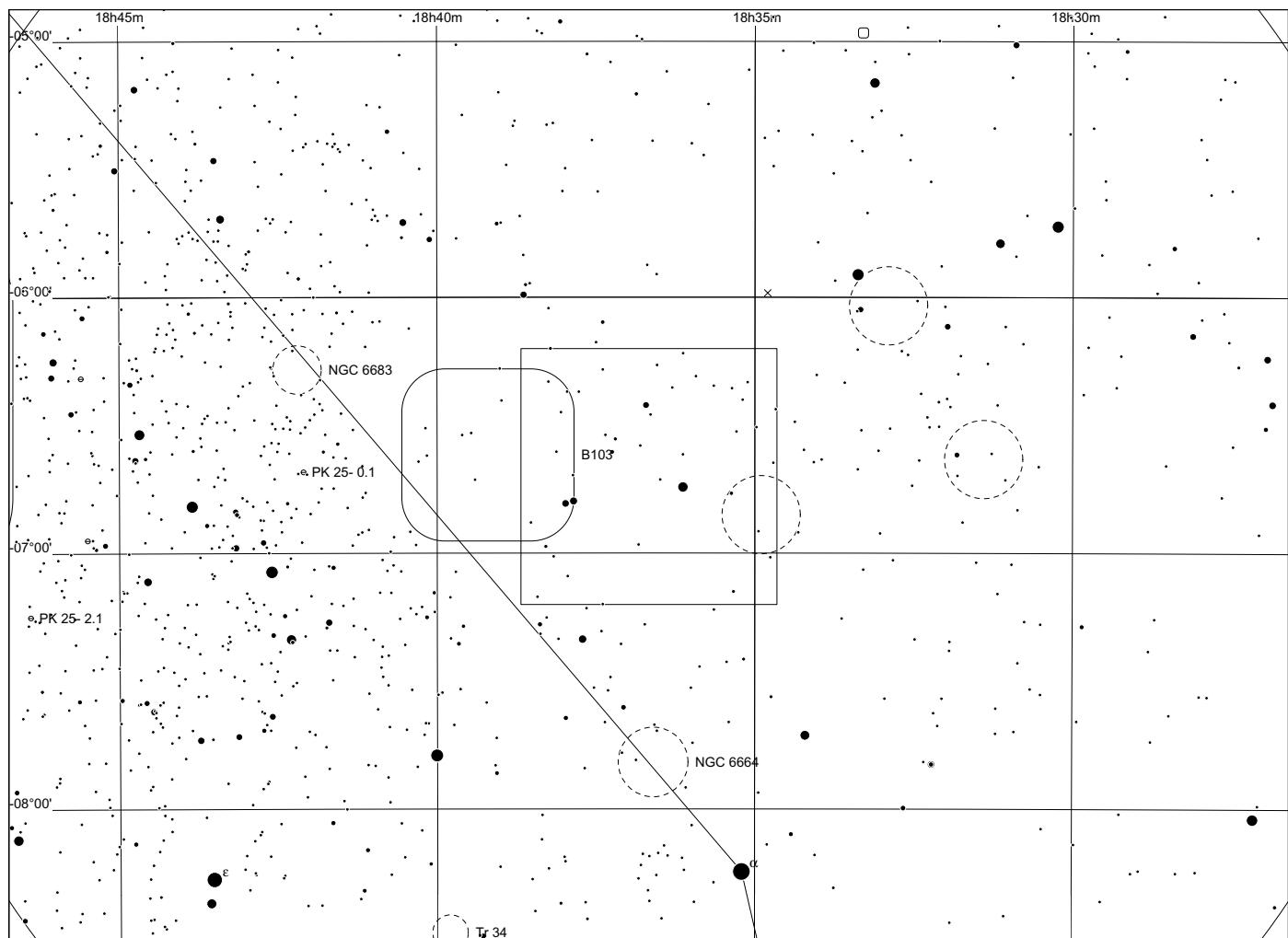
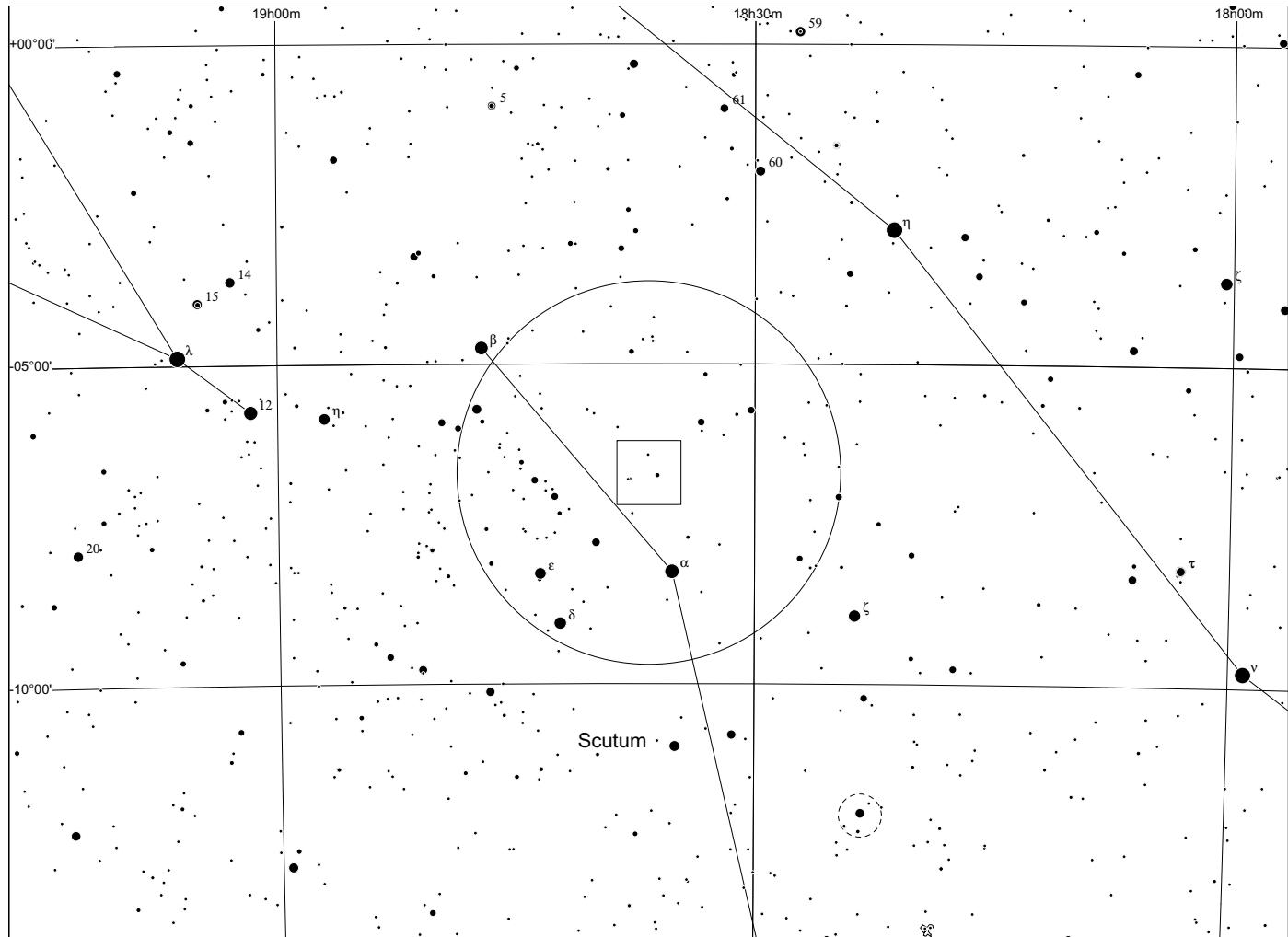
Also: RCW 173 (25.30° , 0.21°) Distance: 2200 pc, Size: 12.8 pc Source: 2003A&A...397..133R

This large nebula, which is also called LBN 82 and W42, but is most often referenced as GAL 025.4-00.2 or GAL 025.38-00.18 in the scientific literature, has a bewildering number of different names in SIMBAD (not all cross-referenced).

The radio source W42 has wildly varying distance estimates (from 13400 parsecs to 2200 parsecs). If the near estimate of 2200 parsecs (which is from a recent paper published in 2000) is accepted, then W42 is likely part of the Sh 2-60 nebula. Infrared imagery in the same paper shows that W42 is energised by a massive, dense and young OB star cluster embedded in an obscuring dust cloud in the bottom left part of this image.

To compound the confusion, the nebulosity in this direction actually consists of several distinct HII regions, one (G25.4SE) that has a distance estimated at 4600 parsecs (although the above paper identifies this as W42 at 2200 parsecs) and another (G25.4NW) at a distance of about 12000 parsecs. The distant (14500 parsecs) radio source GAL 025.52+00.22, is also in this field and is believed to house a Luminous Blue Variable similar to Eta Carinae.

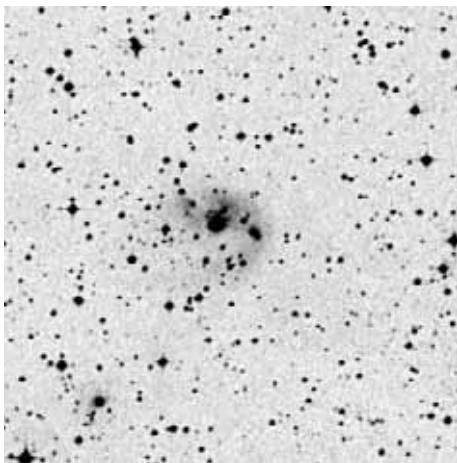
Observing notes:



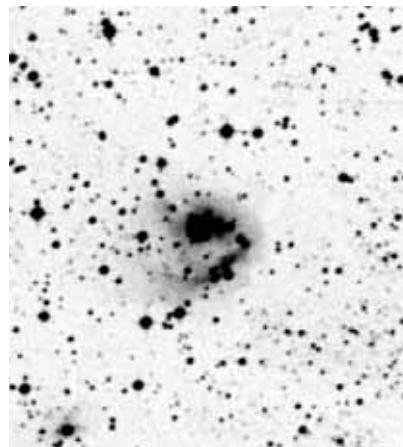


Sh 2 - 61
in Scutum

60x60, red



POSS blue



POSS red



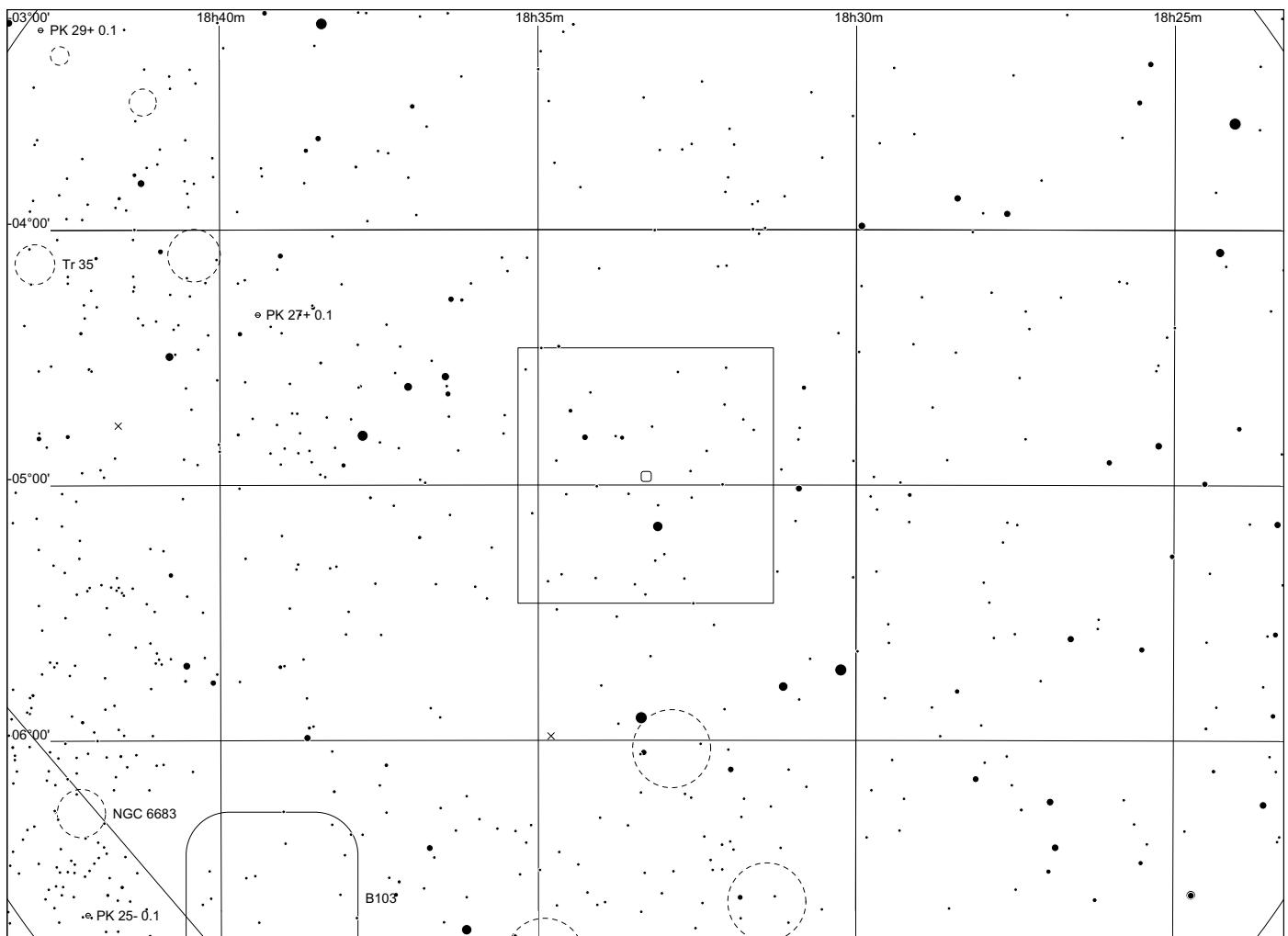
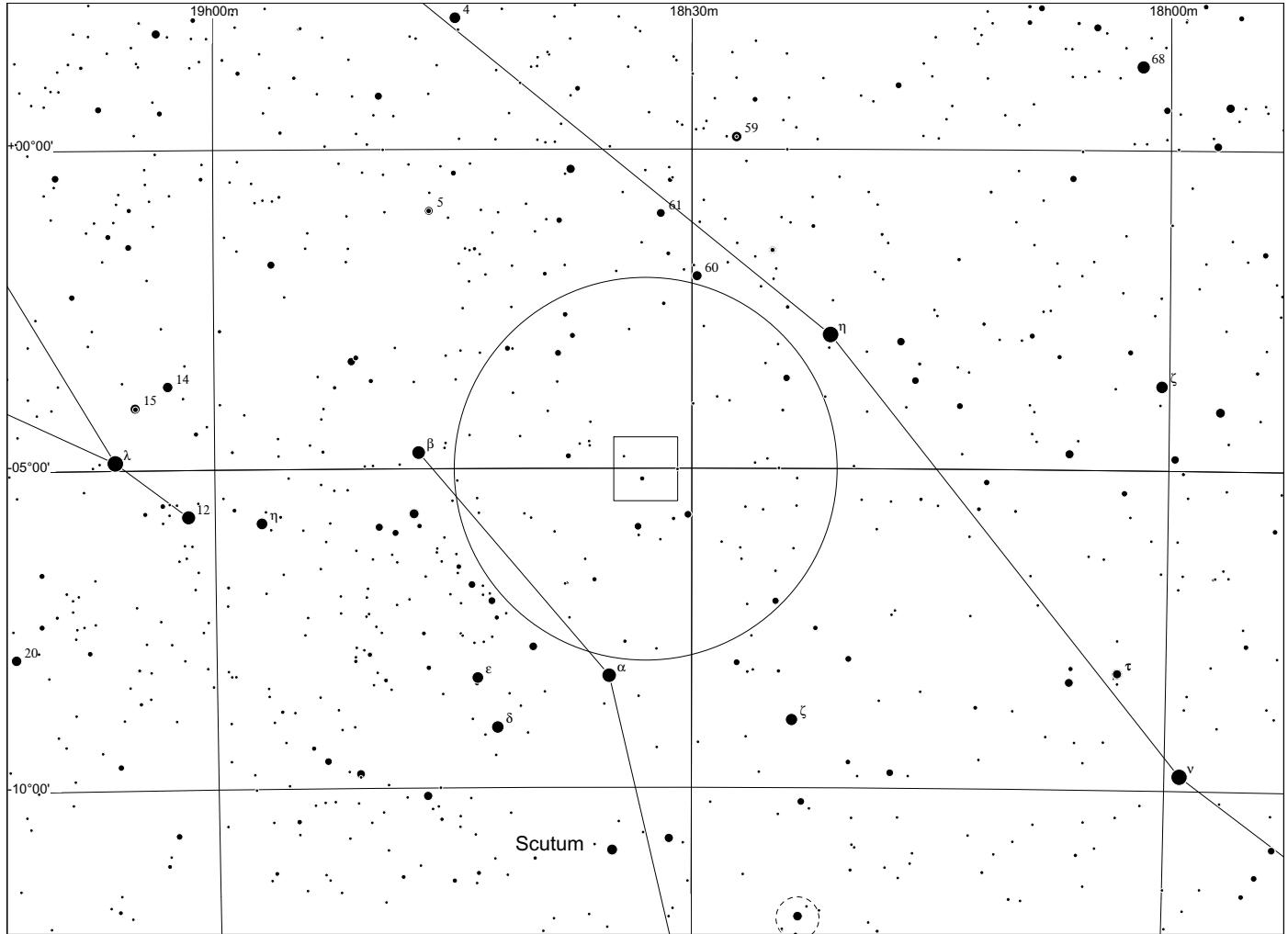
composite

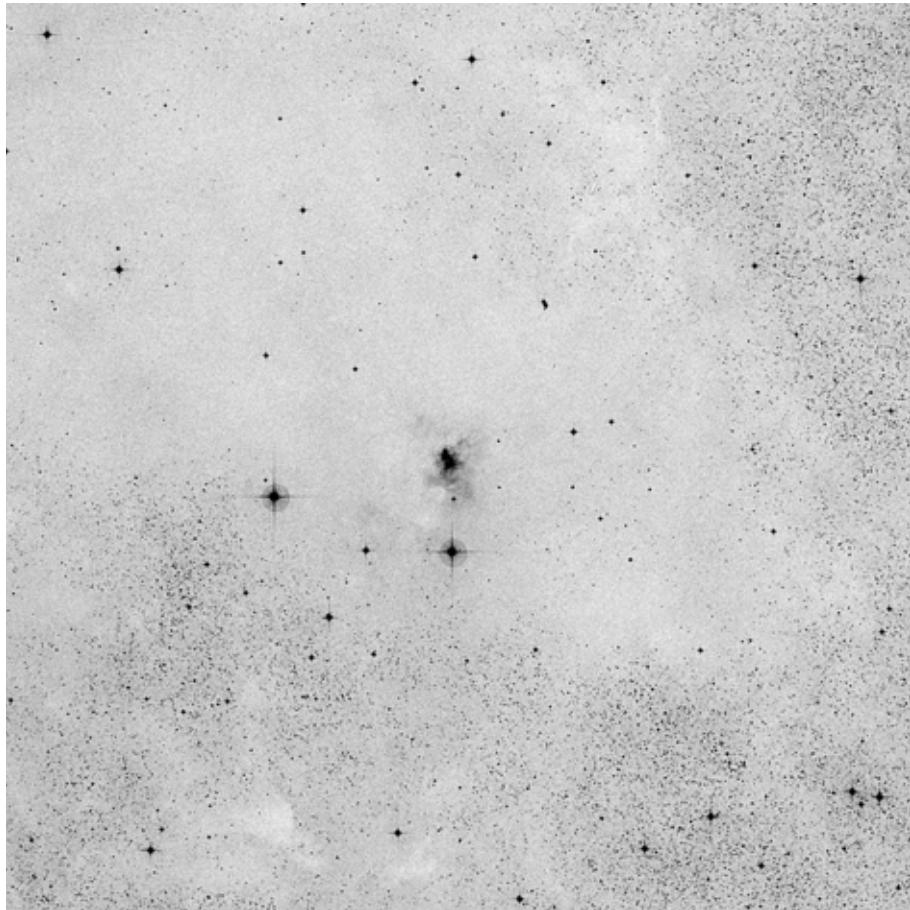
	other name	RA	dec	dia. '	F	S	B
Sh 2-061		18 32 54.5	-05 00 36	2	3	2	3

(26.44°, 1.74°) Distance: 2300 pc, Size: 1.3 pc Source: 2003A&A...397..133R

This object is sometimes mistaken for a planetary nebula but in fact is a compact HII region ionised by at least 3 B1 stars and embedded in a 23 thousand solar mass molecular cloud. There is a second distance estimate of 1700 parsecs.

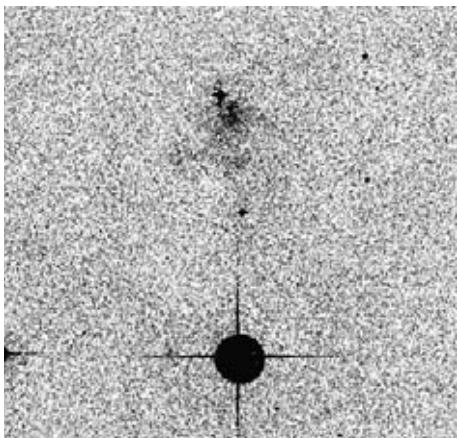
Observing notes:



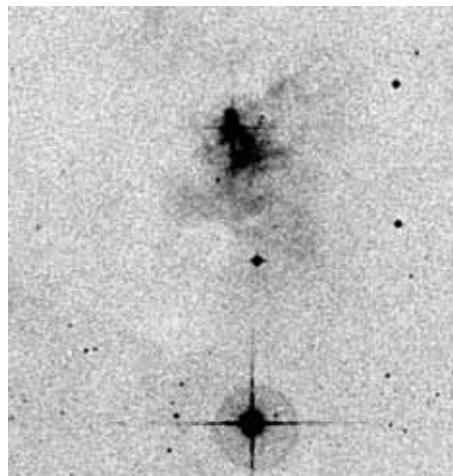


**Sh 2 - 62
in Serpens**

60x60, red



POSS blue



POSS red



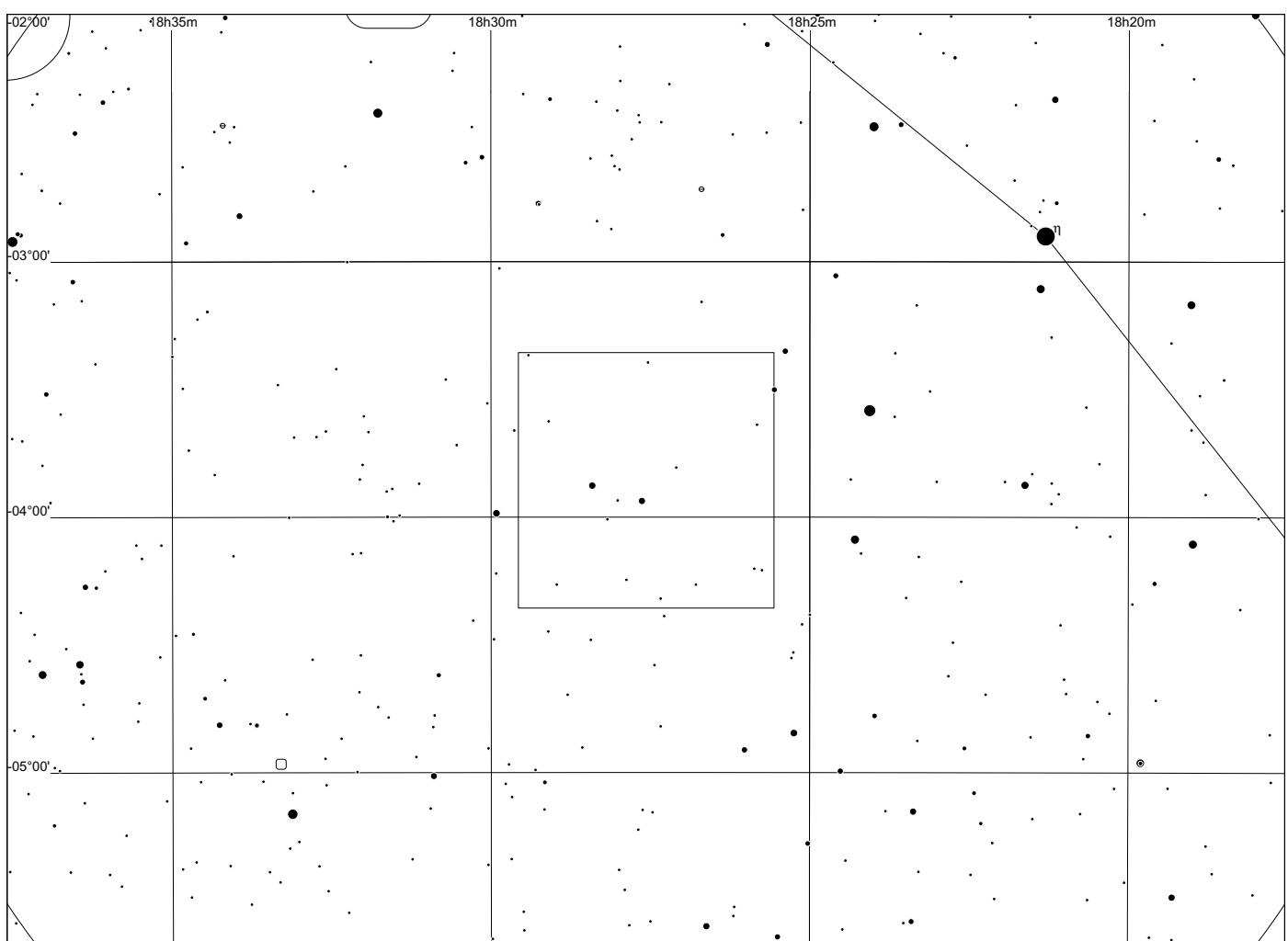
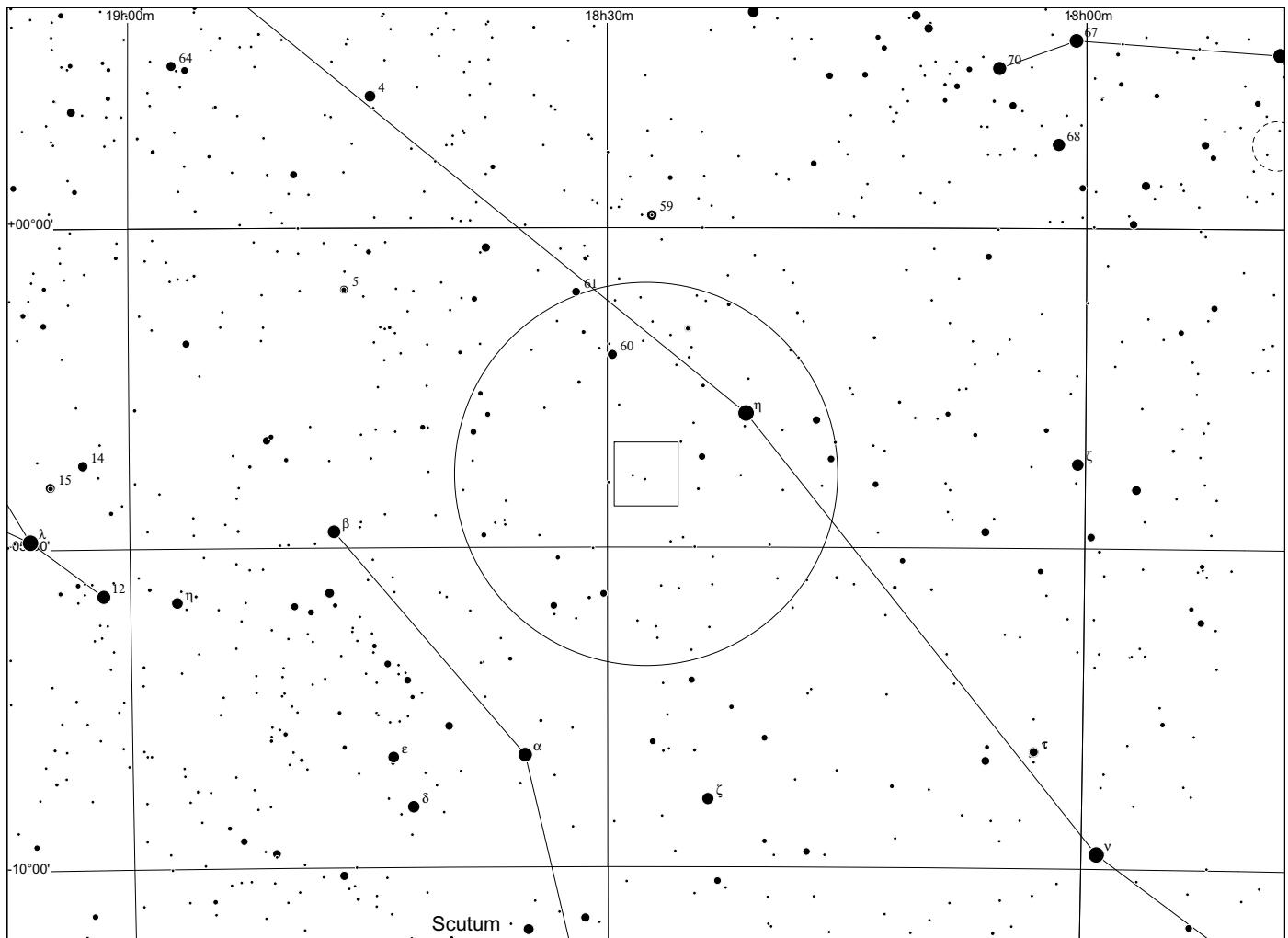
composite

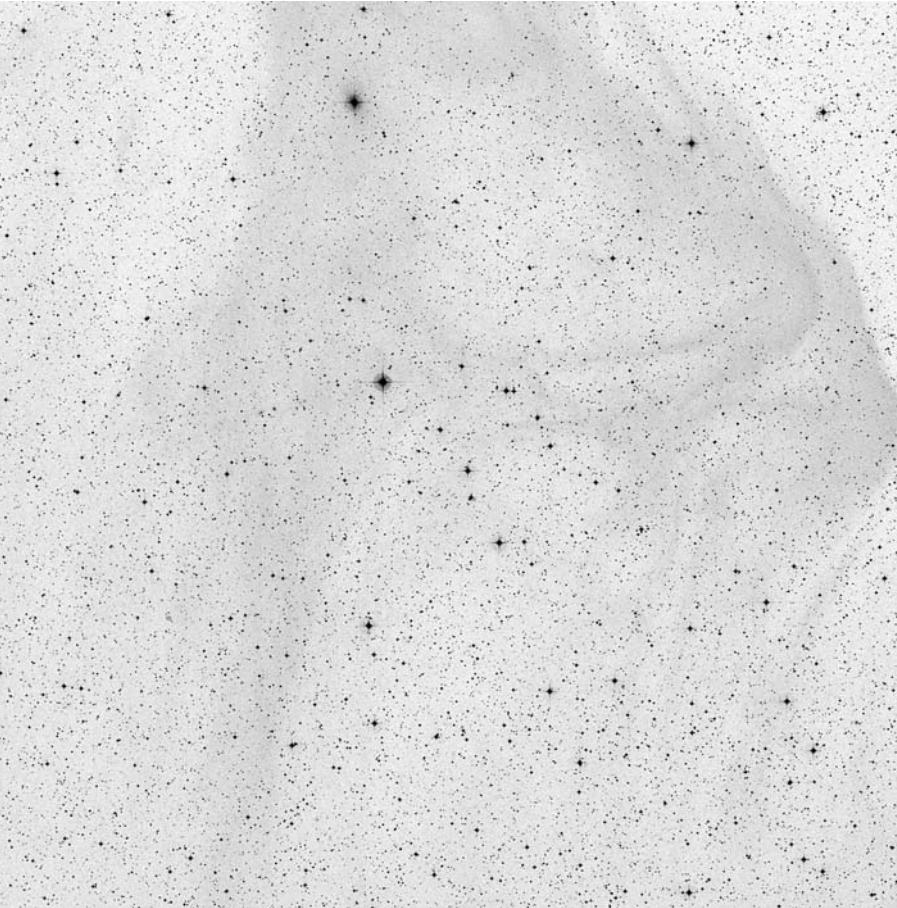
	other name	RA	dec	dia. '	F	S	B
Sh 2-062		18 27 34.2	-03 51 22	4	3	1	1

This tiny nebula is visible against and perhaps embedded in, the Aquila Rift complex of dark clouds.

Superimposed on this nebula is the B1.5e V Herbig Be star MWC 297.

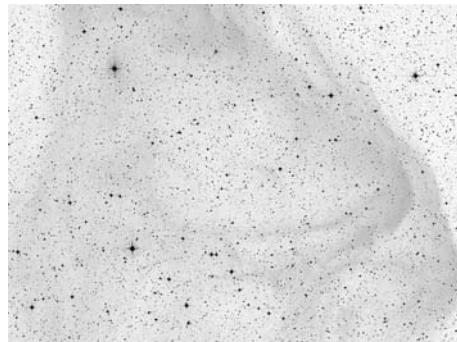
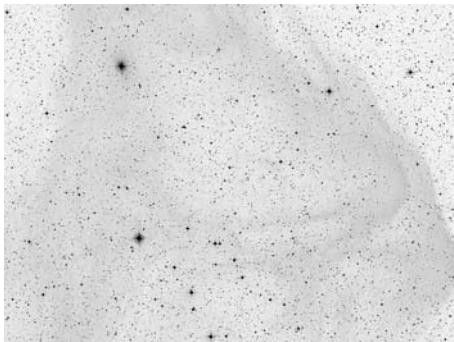
Observing notes:





**Sh 2 - 63
in Sagittarius**

60x60, blue



POSS blue

POSS red

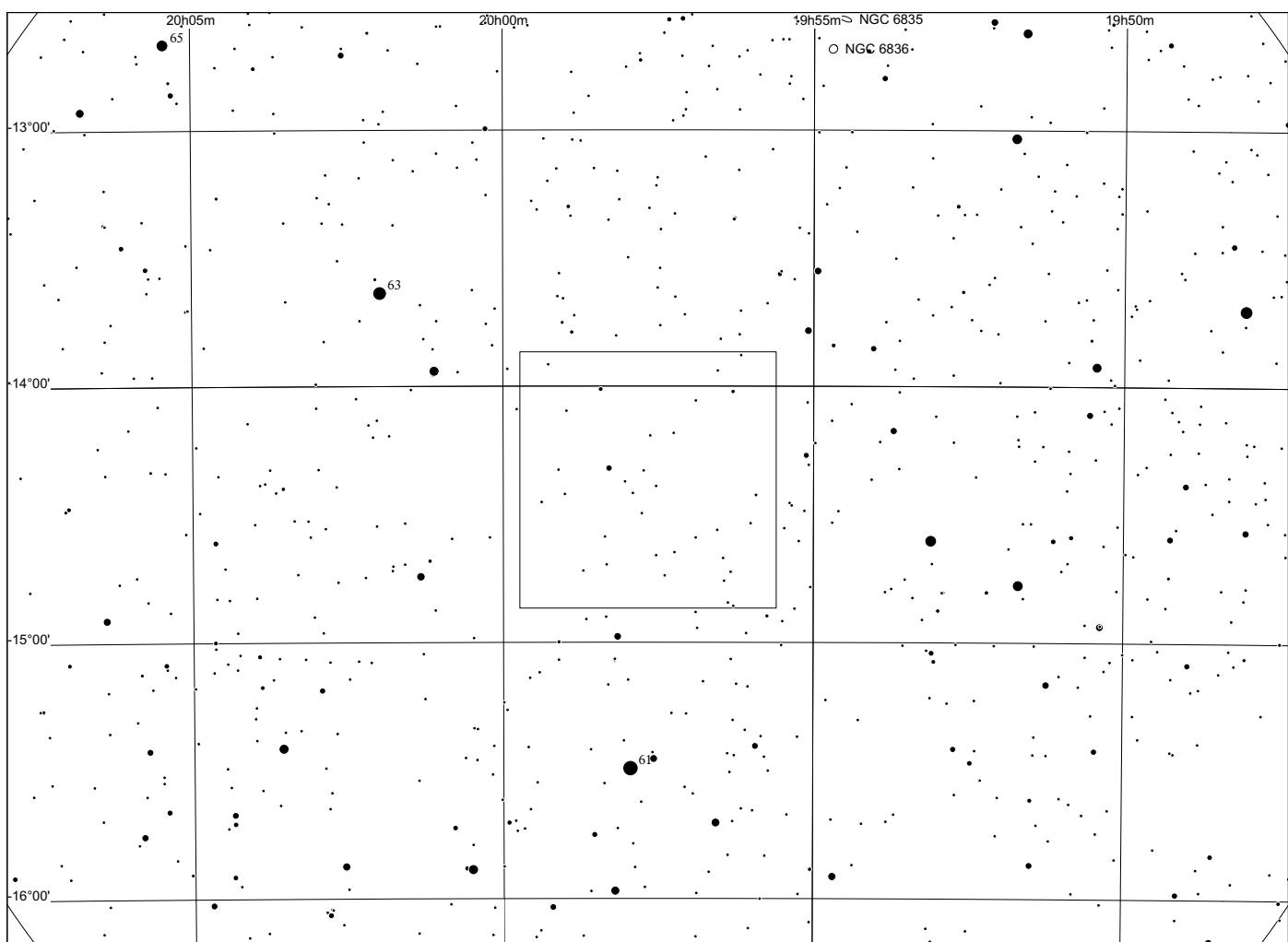
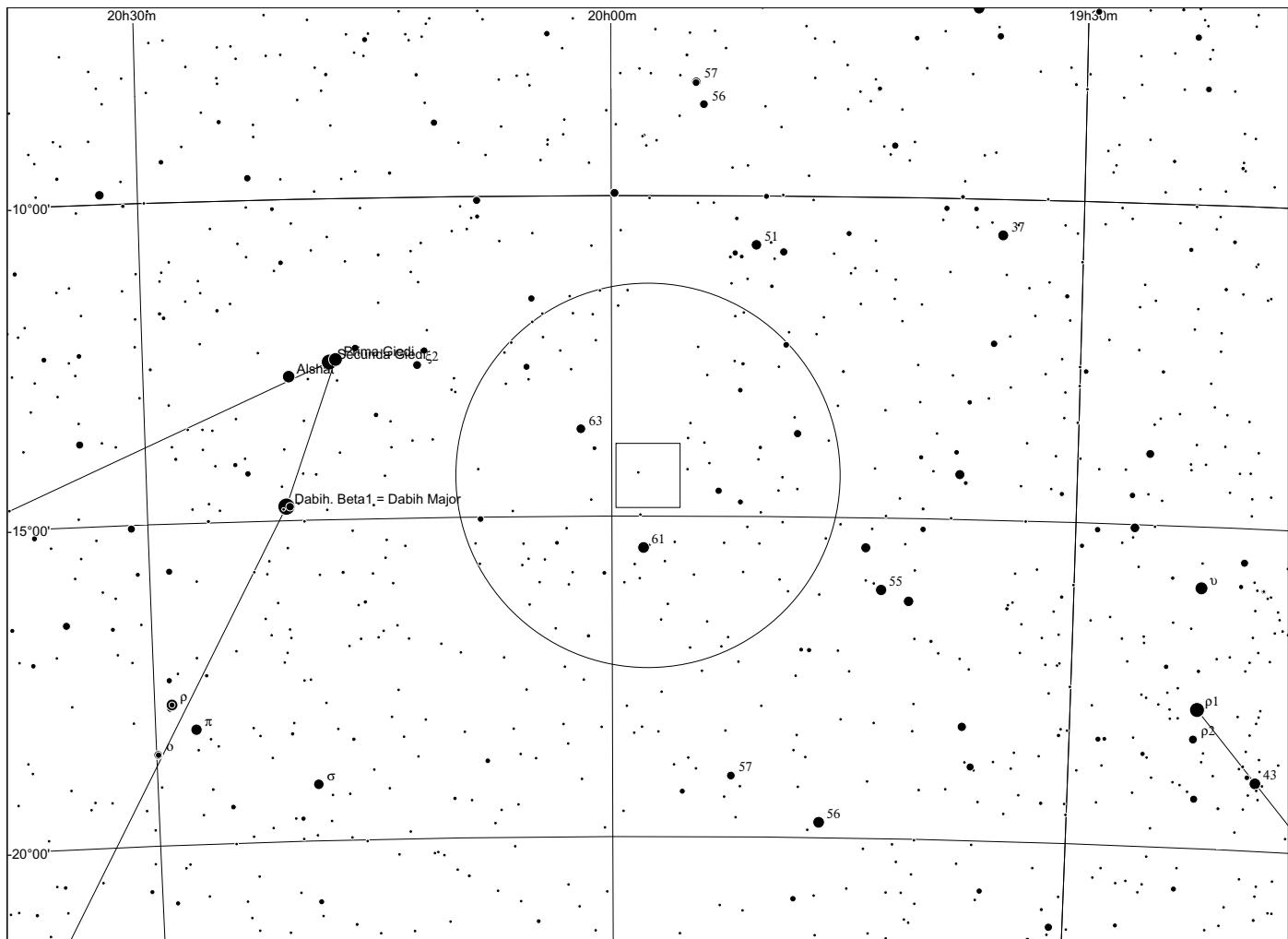
RGB Dean Salman

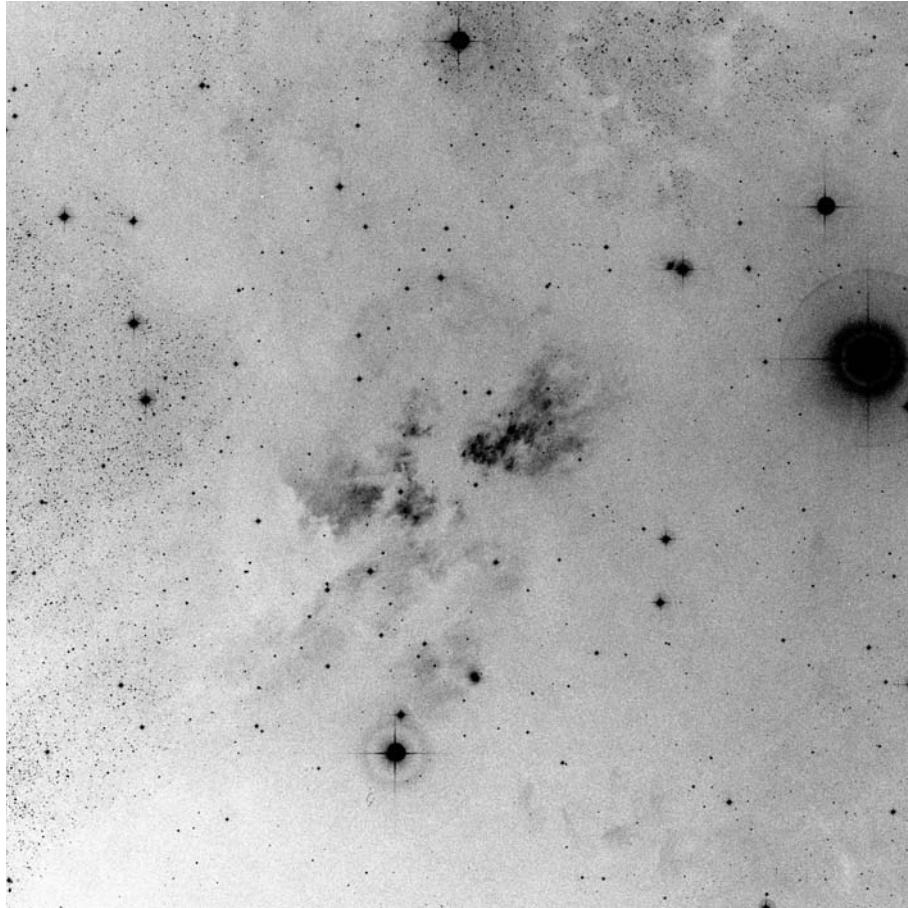
	other name	RA	dec	dia. '	F	S	B
Sh 2-063		19 57 42.5	-14 06 57	55	3	2	1

(27.34°, -20.94°) Distance: Unknown

This is the high latitude molecular cloud MBM 159, which is located at a distance of about 220 pc and may form part of the Aquila rift.

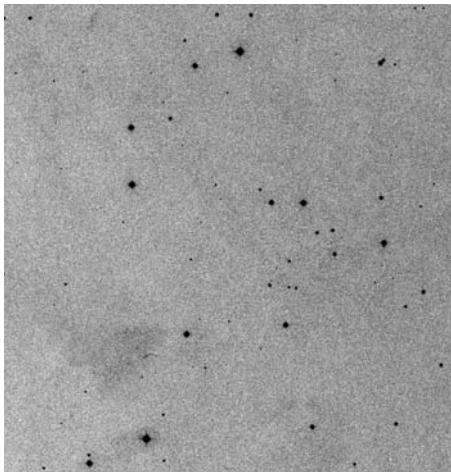
Observing notes:



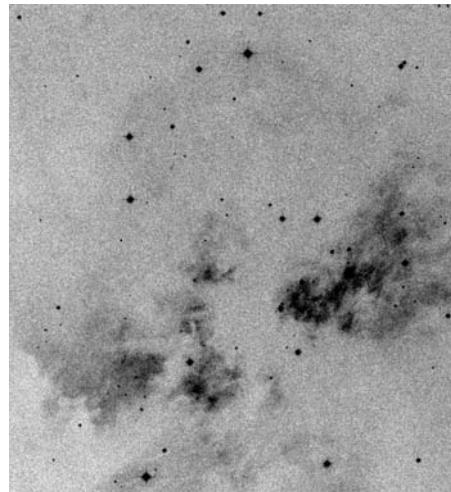


**Sh 2 - 64
in Serpens**

60x60, red



POSS blue



POSS red



RGB Dean Salman

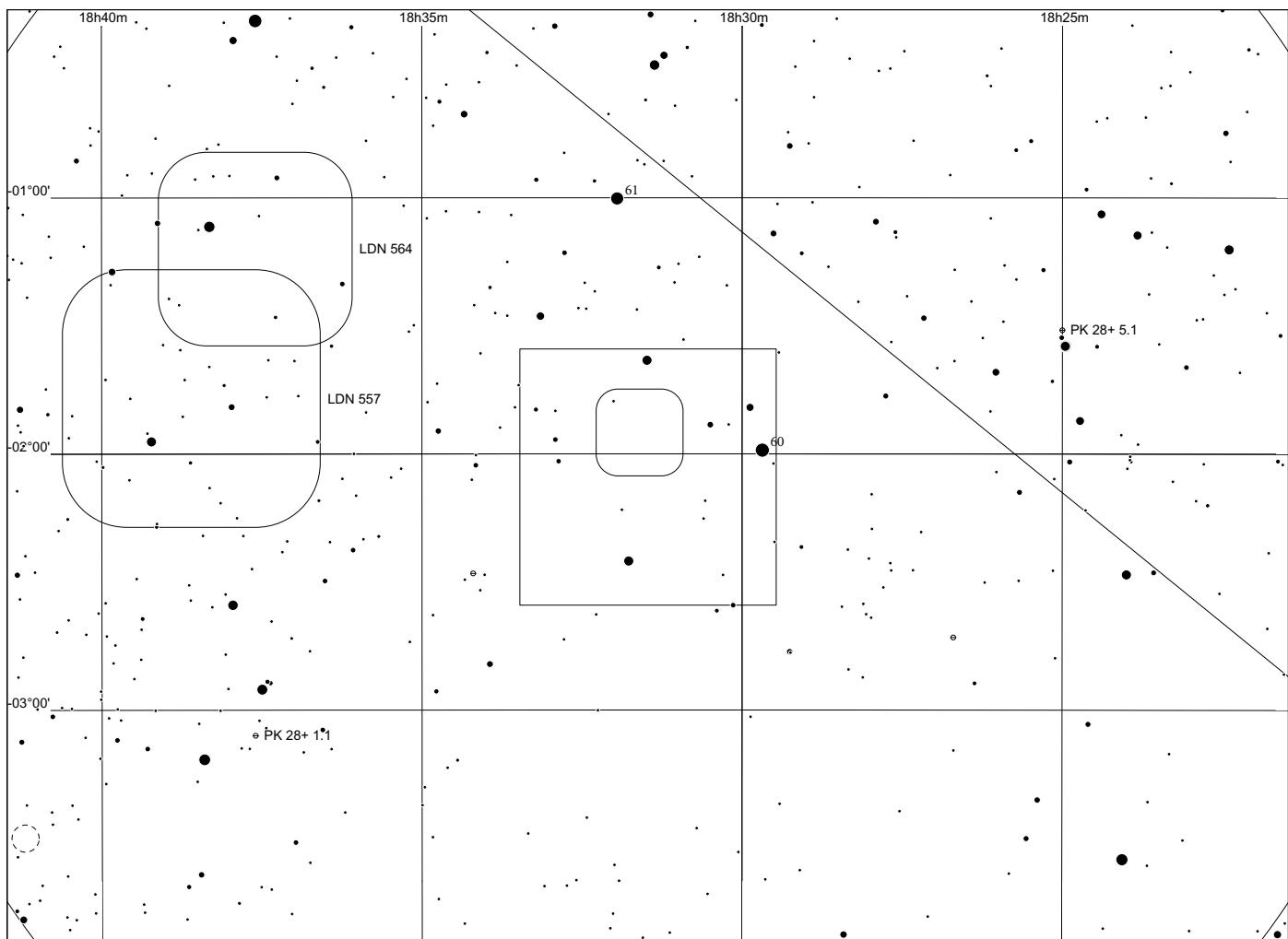
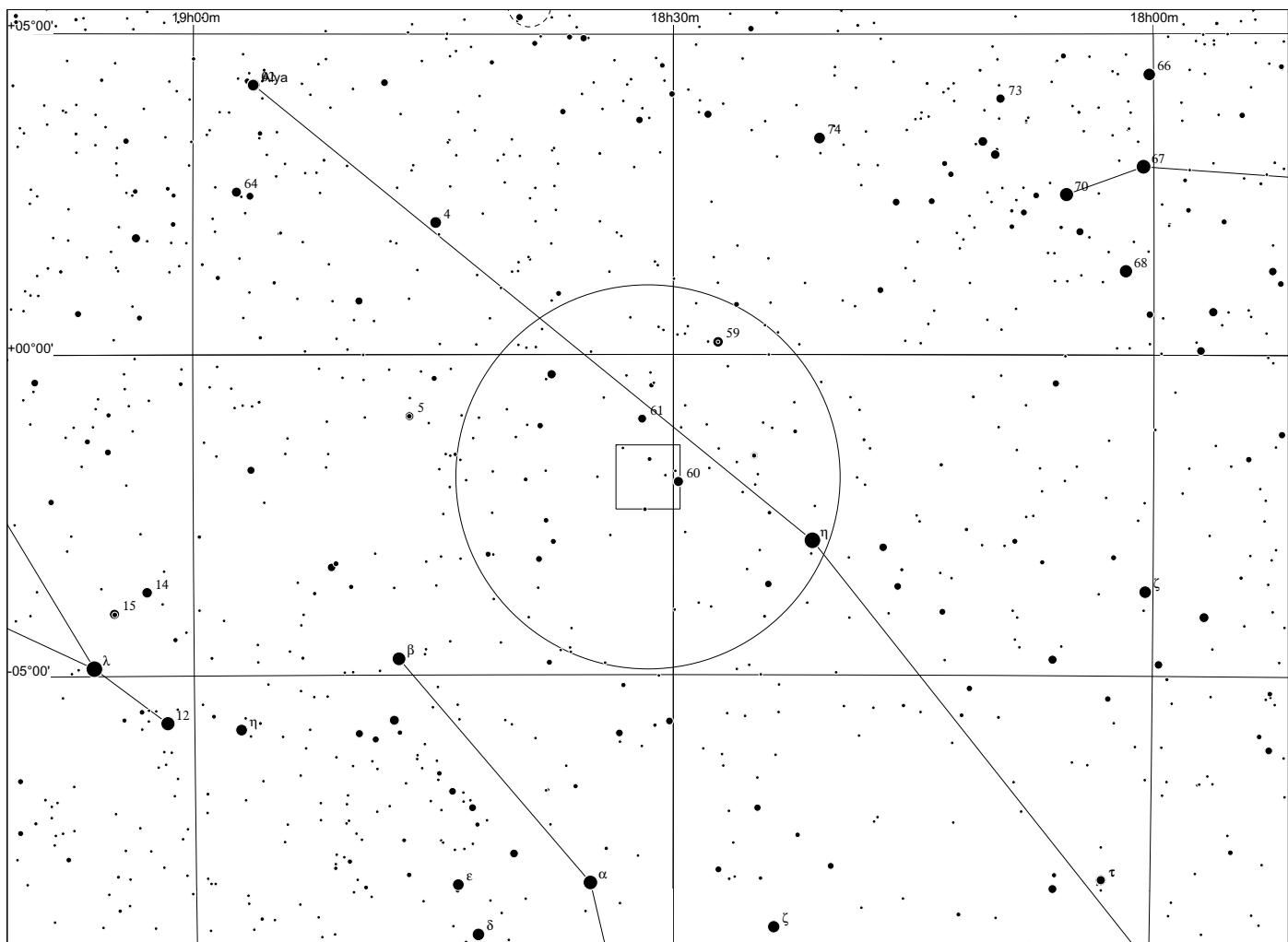
	other name	RA	dec	dia. '	F	S	B
Sh 2-064		18 31 35.0	-01 54 47	25	3	2	2

Also: RCW 174 (28.96°, 3.54°) Distance: 400 pc, Size: 2.9 pc Source: 1999ApJ...520..149S

This is the W40 star formation region, also called LBN 90, and is ionised by the three B1V stars W 40 OS 1a, W 40 OS 2a and W 40 OS 3a.

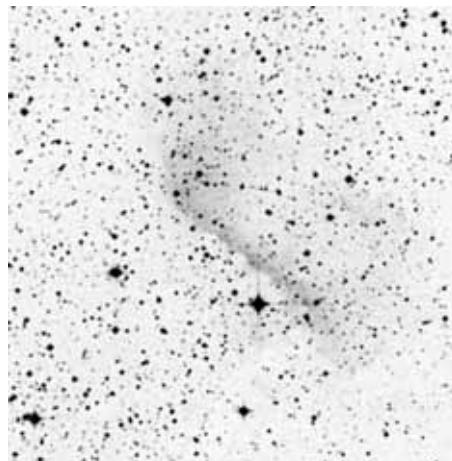
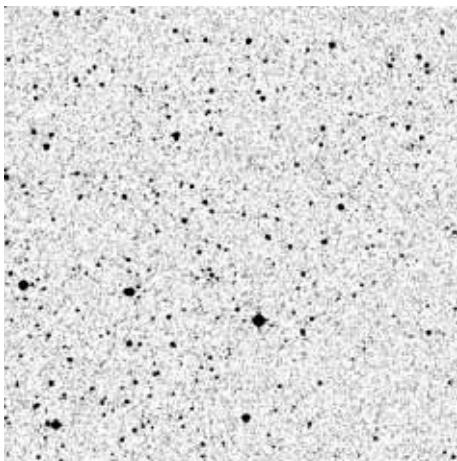
It is obscured by the dust clouds called the Rift, which are located between W40 and our solar system.

Observing notes:





Sh 2 - 65
in Aquila

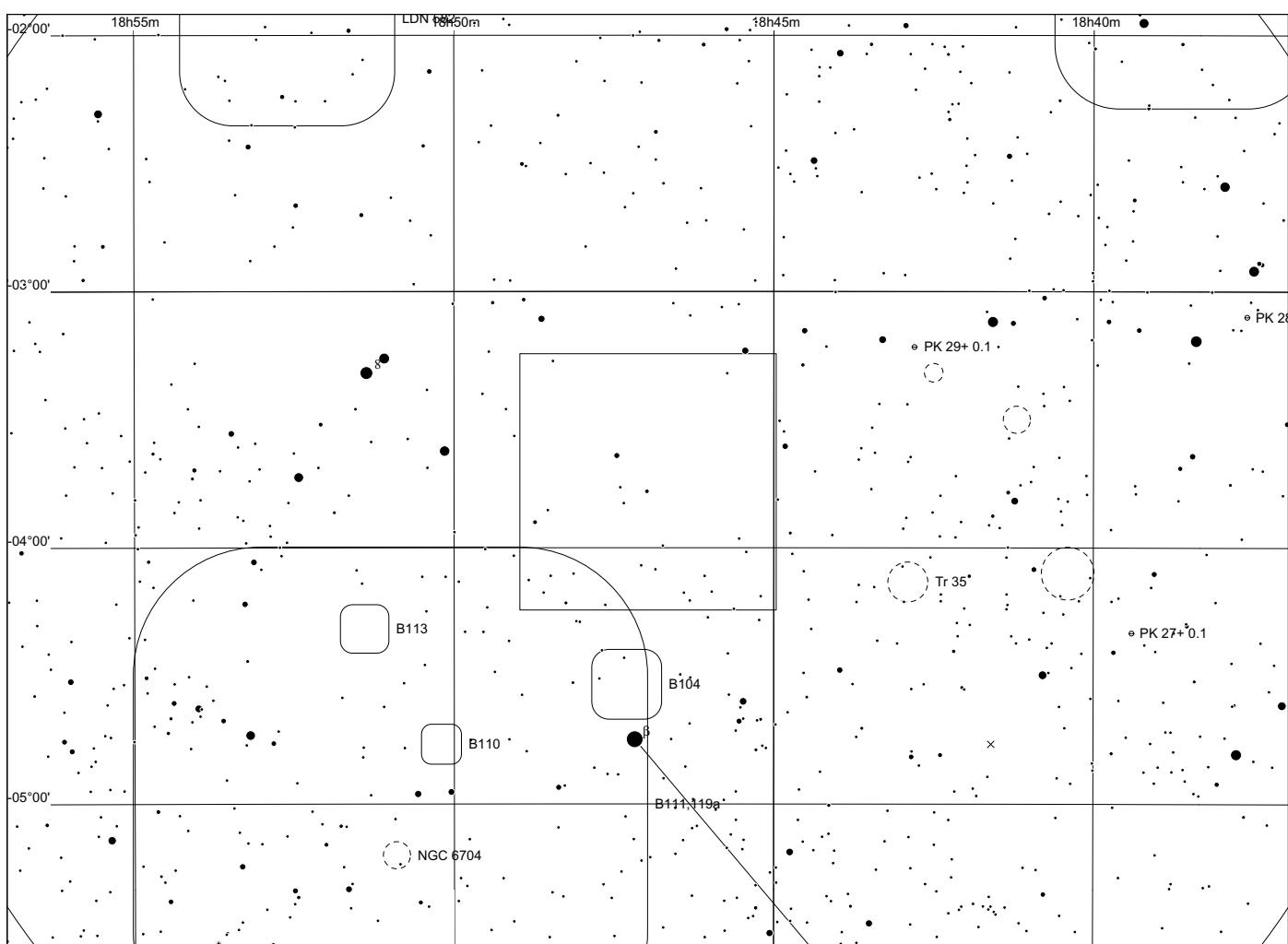
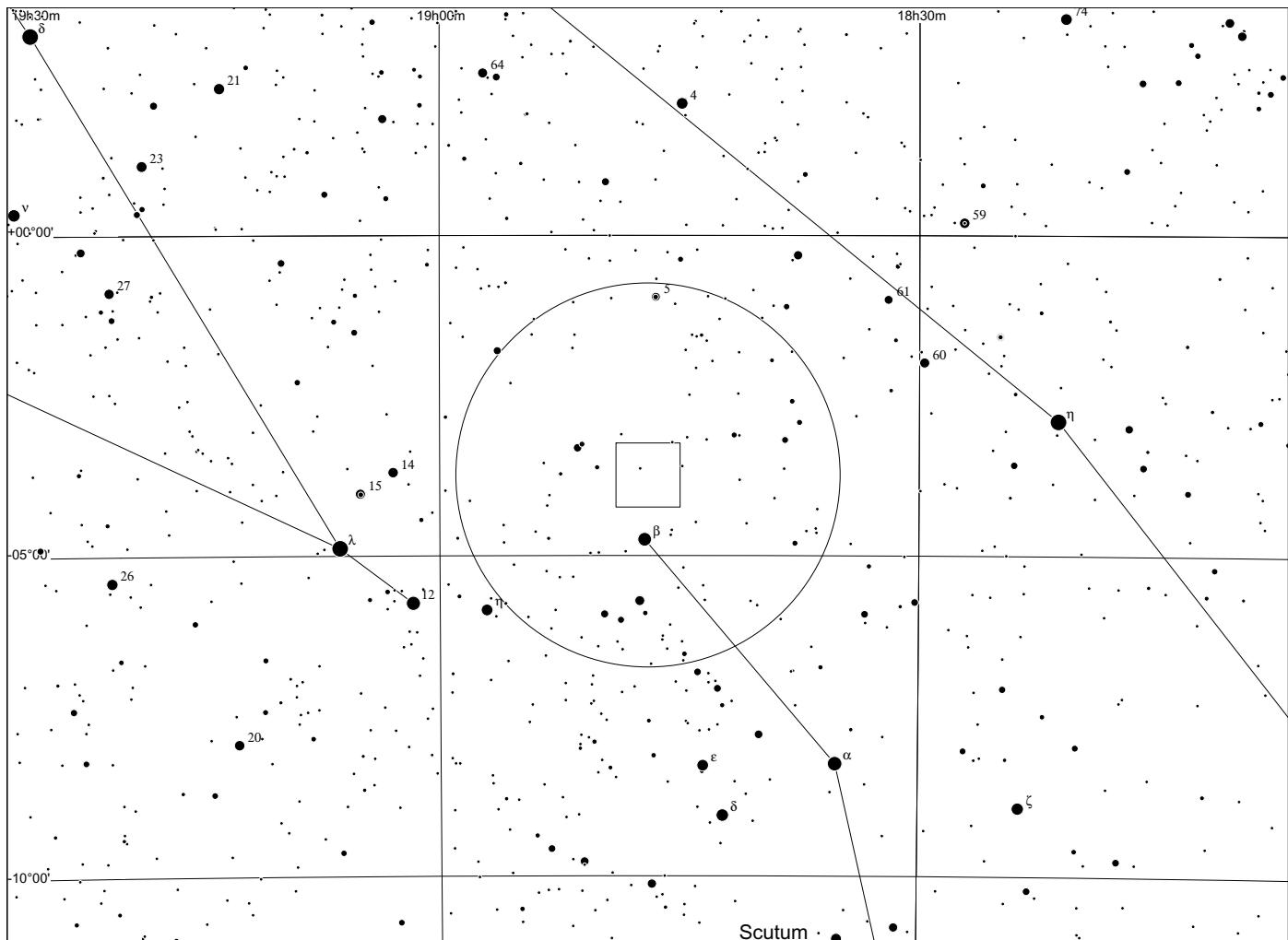


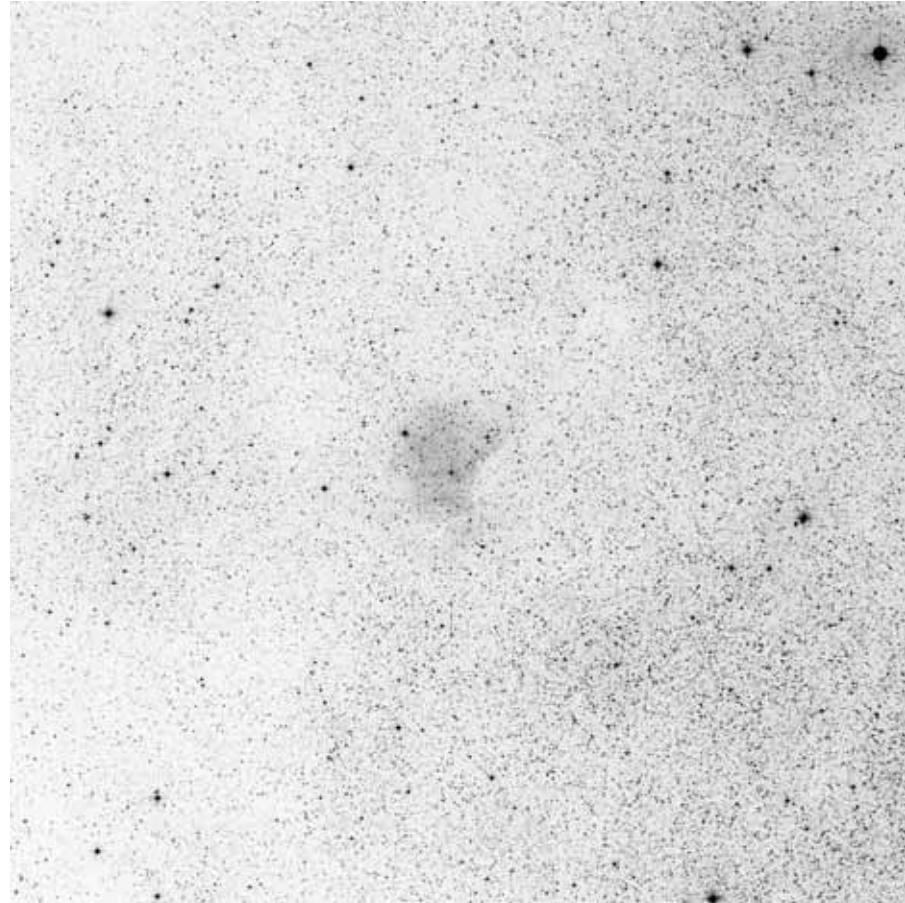
	other name	RA	dec	dia. '	F	S	B
Sh 2-065		18 46 58.0	-03 44 35	7	3	2	2

Also: RCW 175 (29.10° , -0.70°) Distance: 3261 pc, Size: 4.2 pc Source: 2003A&A...397..213P

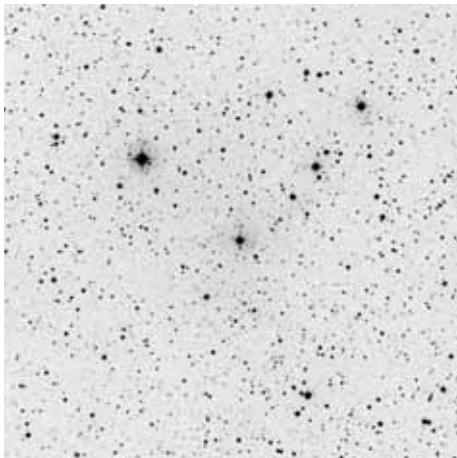
Excited by the B1 II star S65-4, which SIMBAD says should be called [F89b] S65 4.

Observing notes:

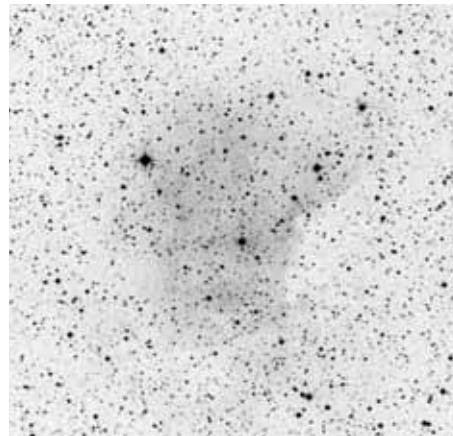




**Sh 2 - 66
in Aquila**



POSS blue



POSS red



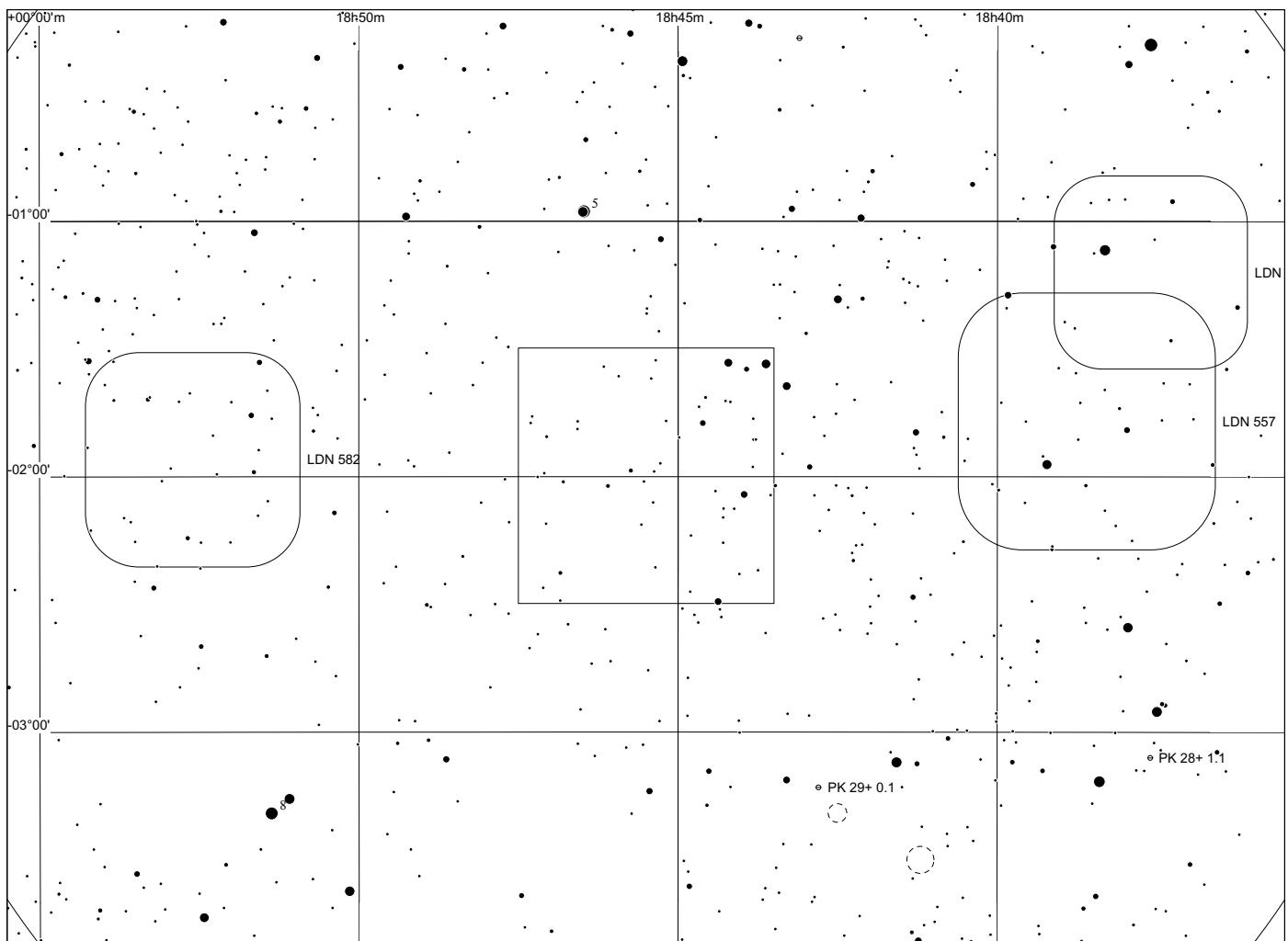
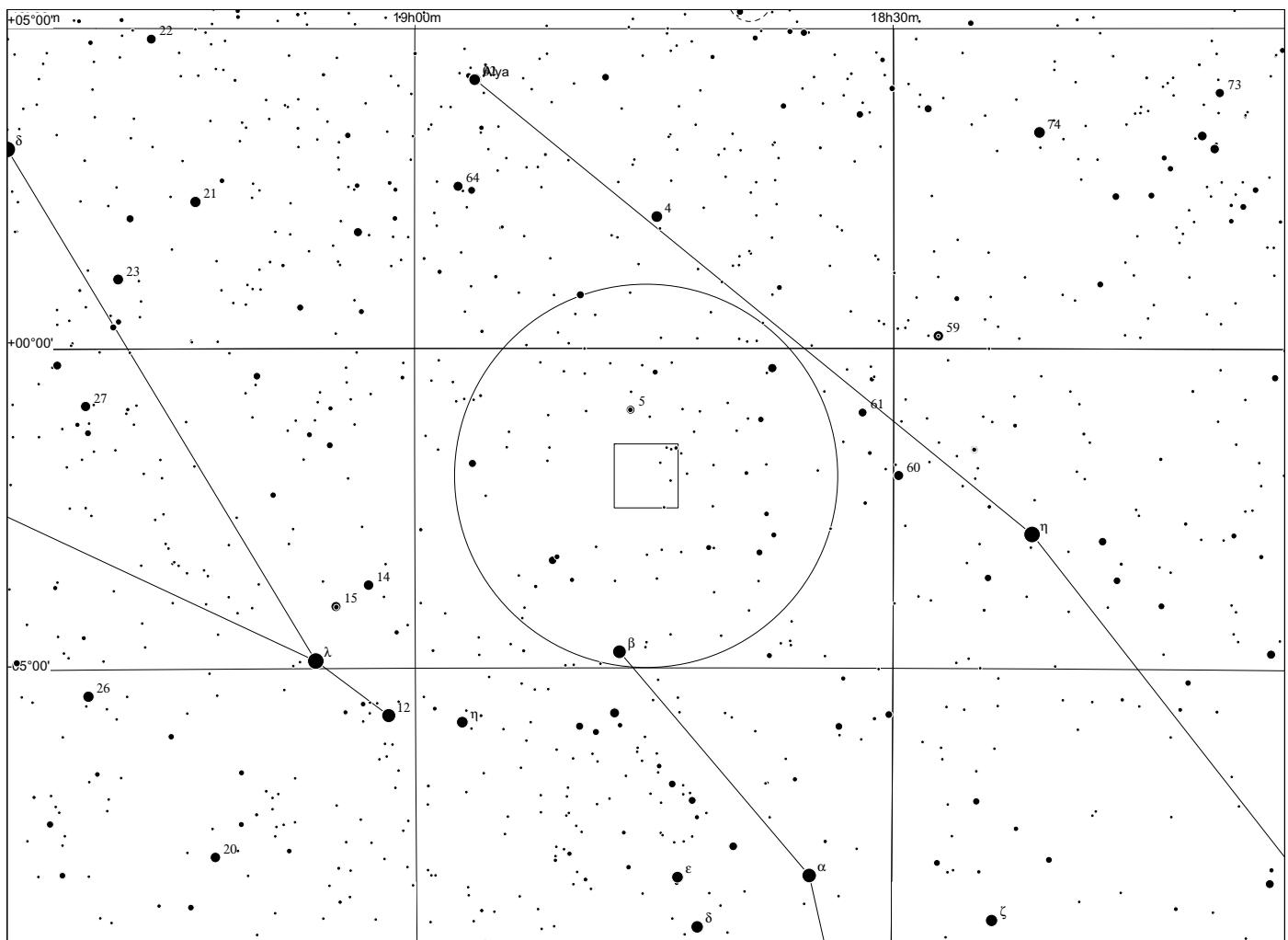
composite

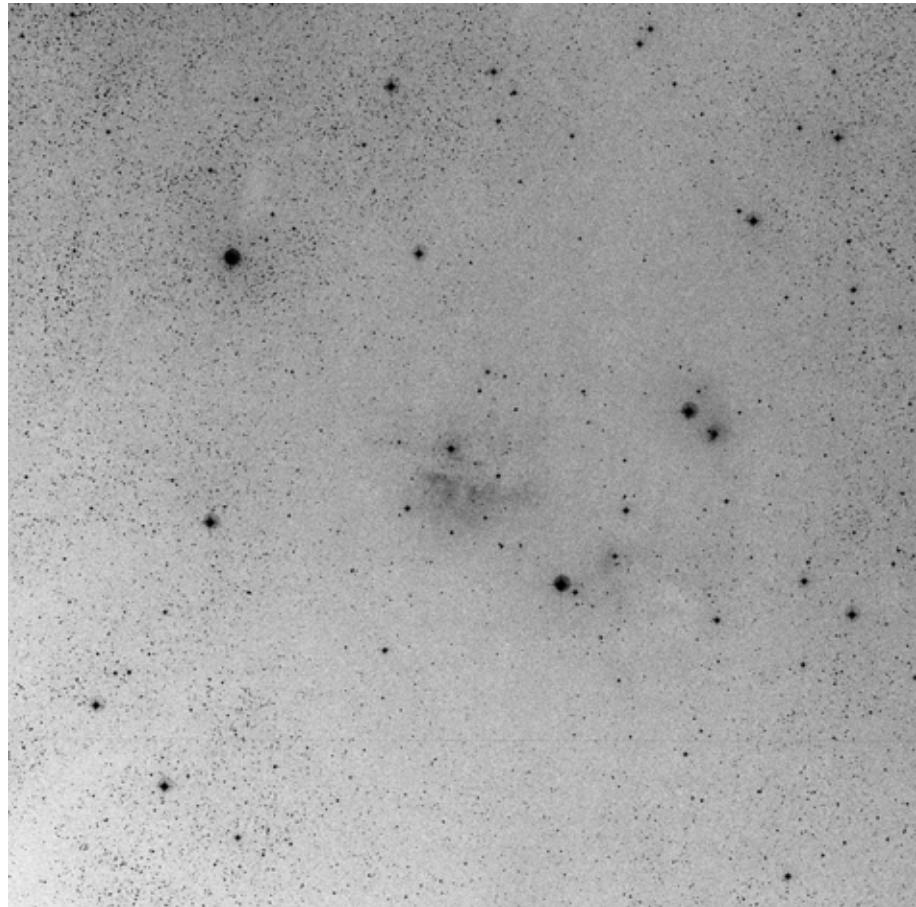
	other name	RA	dec	dia. '	F	S	B
Sh 2-066		18 45 30.0	-01 59 47	8	3	2	2

Also: RCW 176 (30.50° , 0.40°) Distance: 3780 pc, Size: 5.9 pc Source: 2003A&A...397..213P

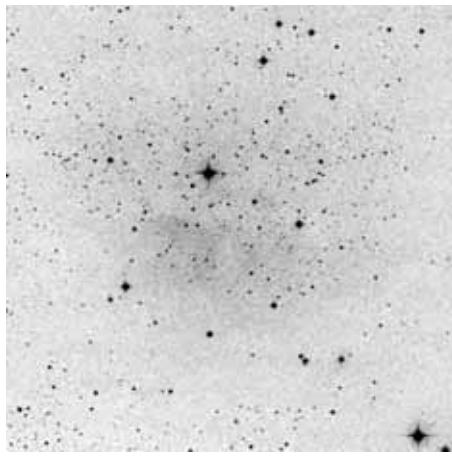
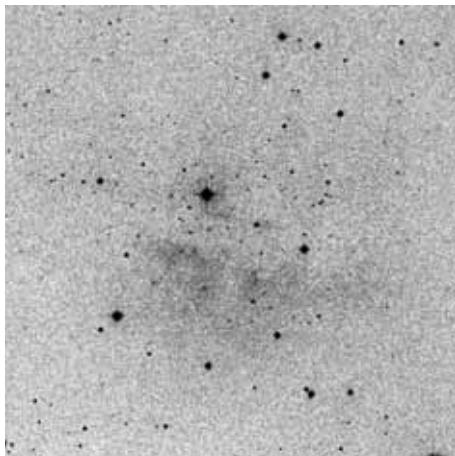
The exciting star for this HII region is the O9.5 III star LS IV -02 16

Observing notes:





Sh 2 - 67
in Aquila



POSS blue

POSS red

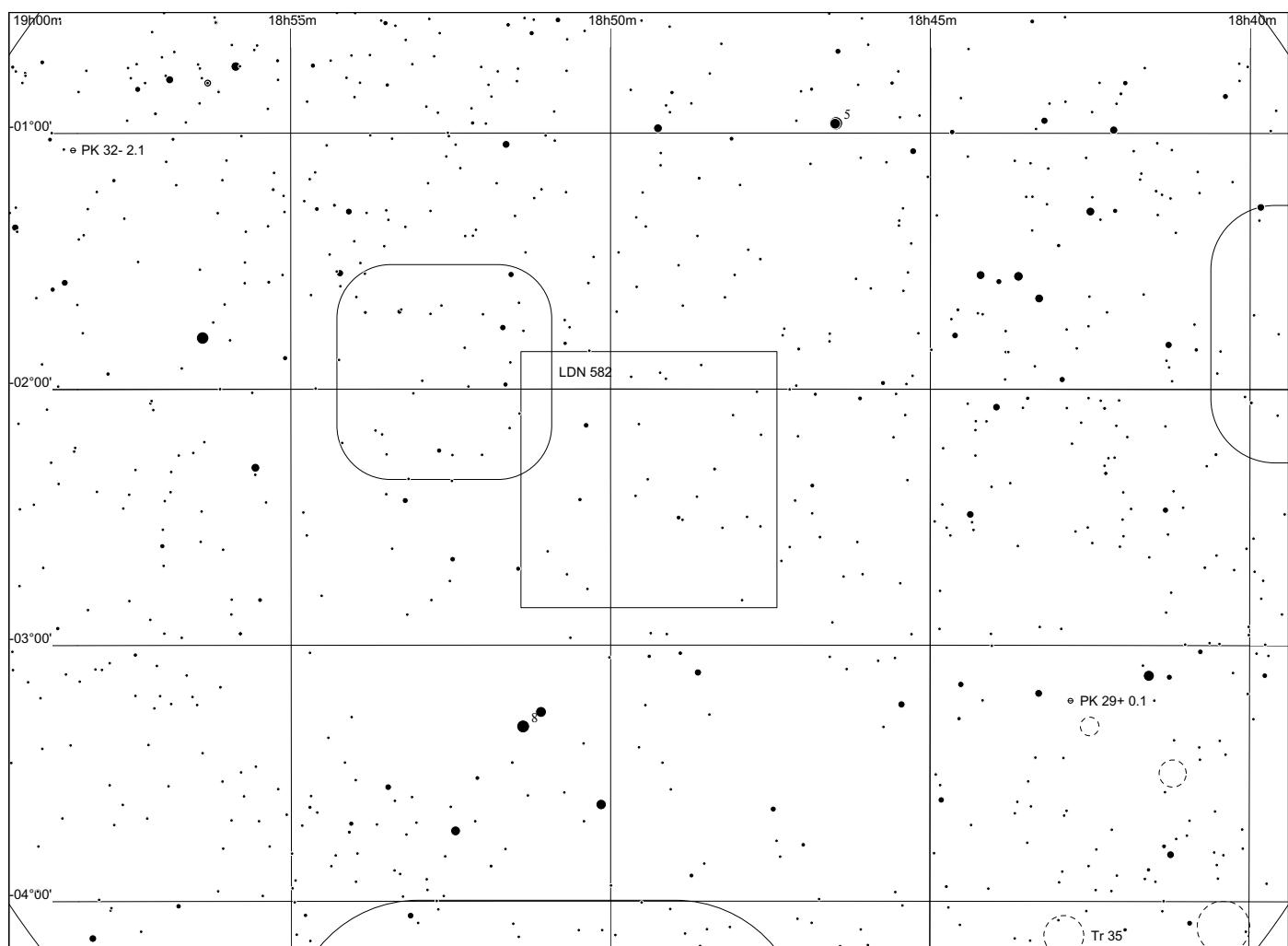
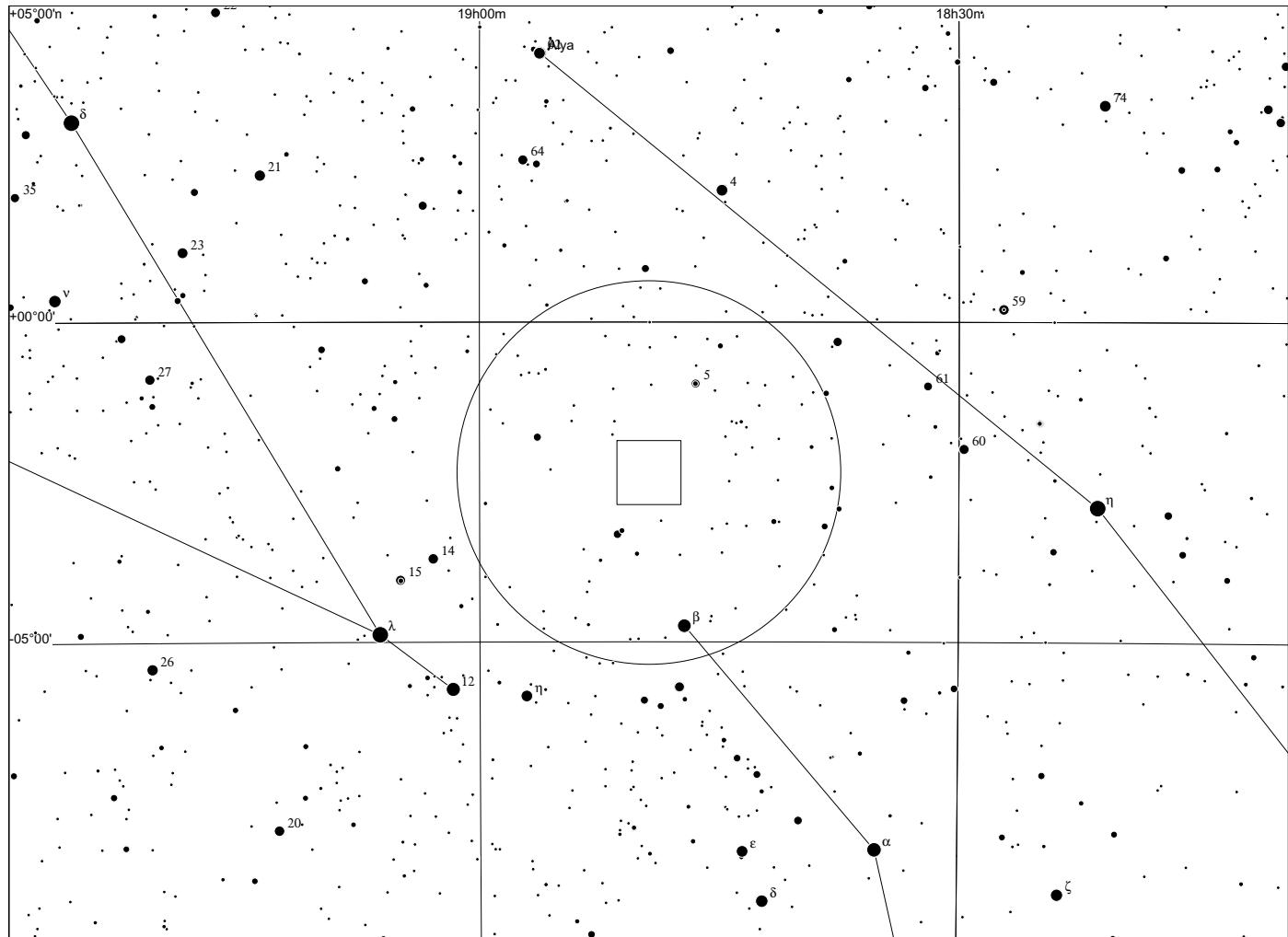
composite

	other name	RA	dec	dia. '	F	S	B
Sh 2-067		18 49 24.4	-02 21 13	10	2	1	1

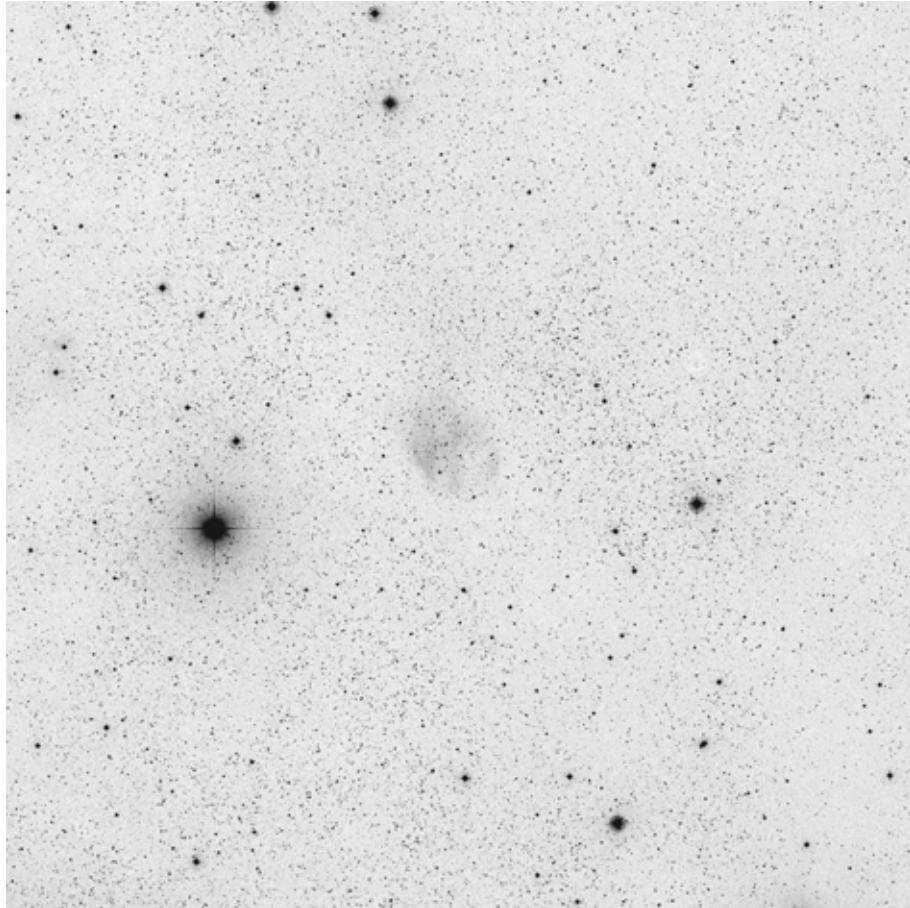
Distance: 400 pc, Size: 1.2 pc, Source: 1982ApJS...49..183B

Also called LBN 94, this nearby nebula is ionised by the B0.5 V star BD -2 4752.

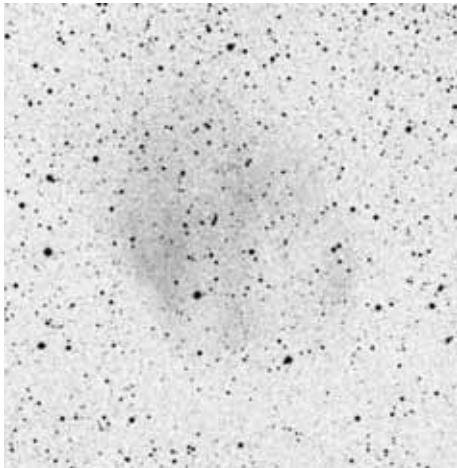
Observing notes:



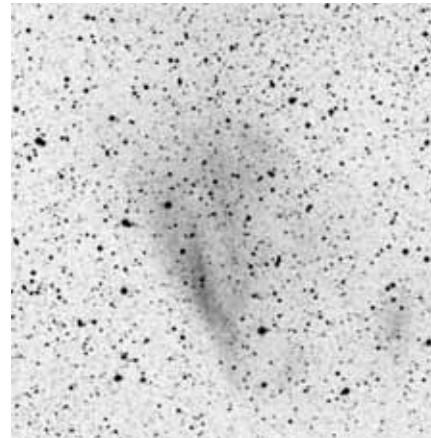
Sh 2 - 68
in Serpens



60x60, blue



POSS blue



POSS red

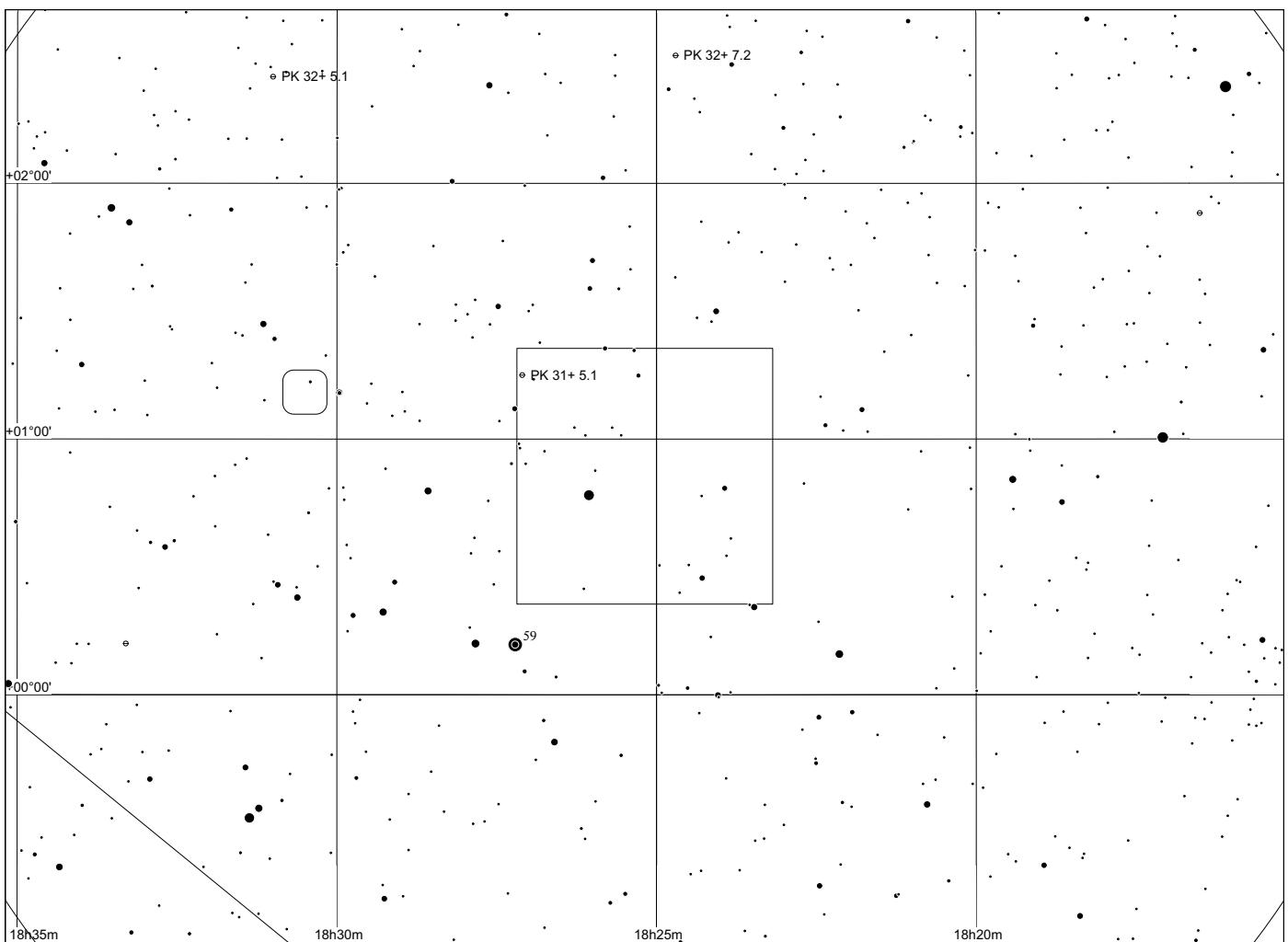
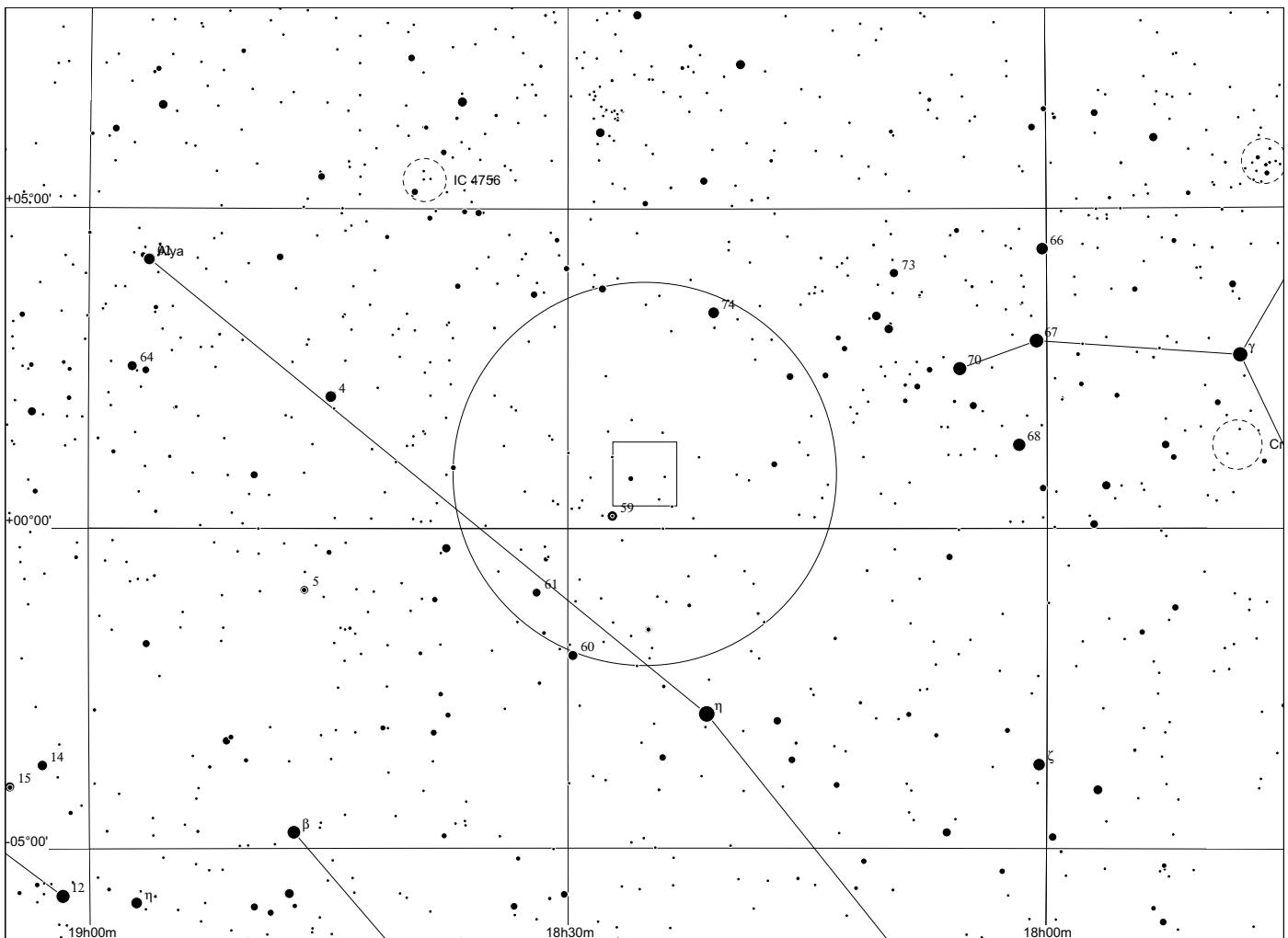


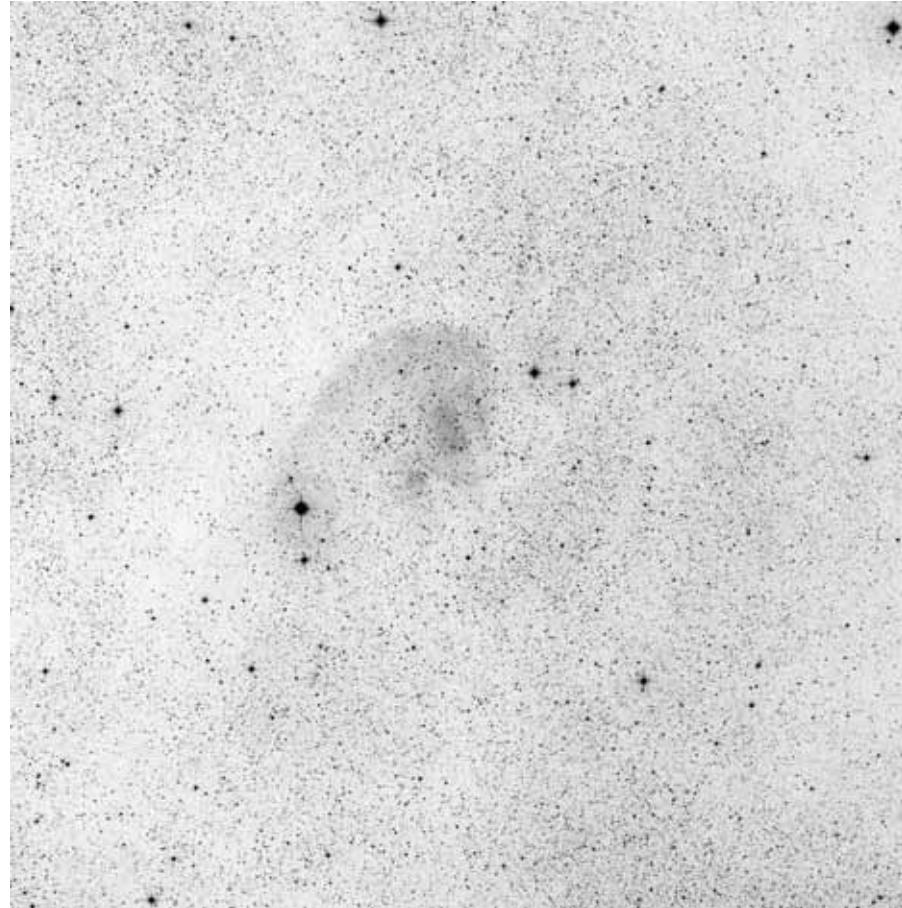
composite

	other name	RA	dec	dia. '	F	S	B
Sh 2-068	PN	18 25 10.8	+00 51 17	8	3	2	2

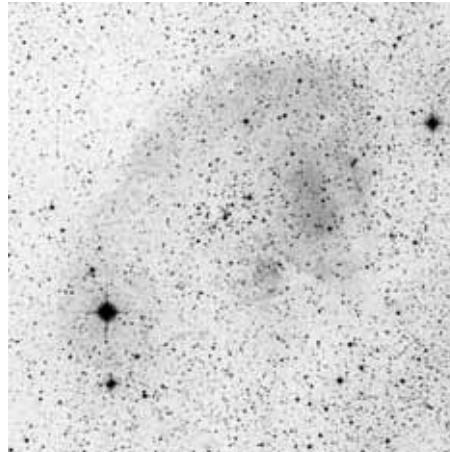
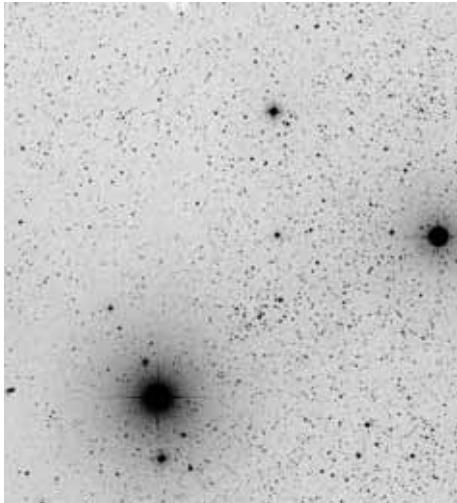
The expansion of this planetary nebula has been halted by the surrounding local gas but the central star has continued to move so as a result the star is no longer at the centre of the nebula.

Observing notes:





Sh 2 - 69
in Aquila



POSS blue

POSS red

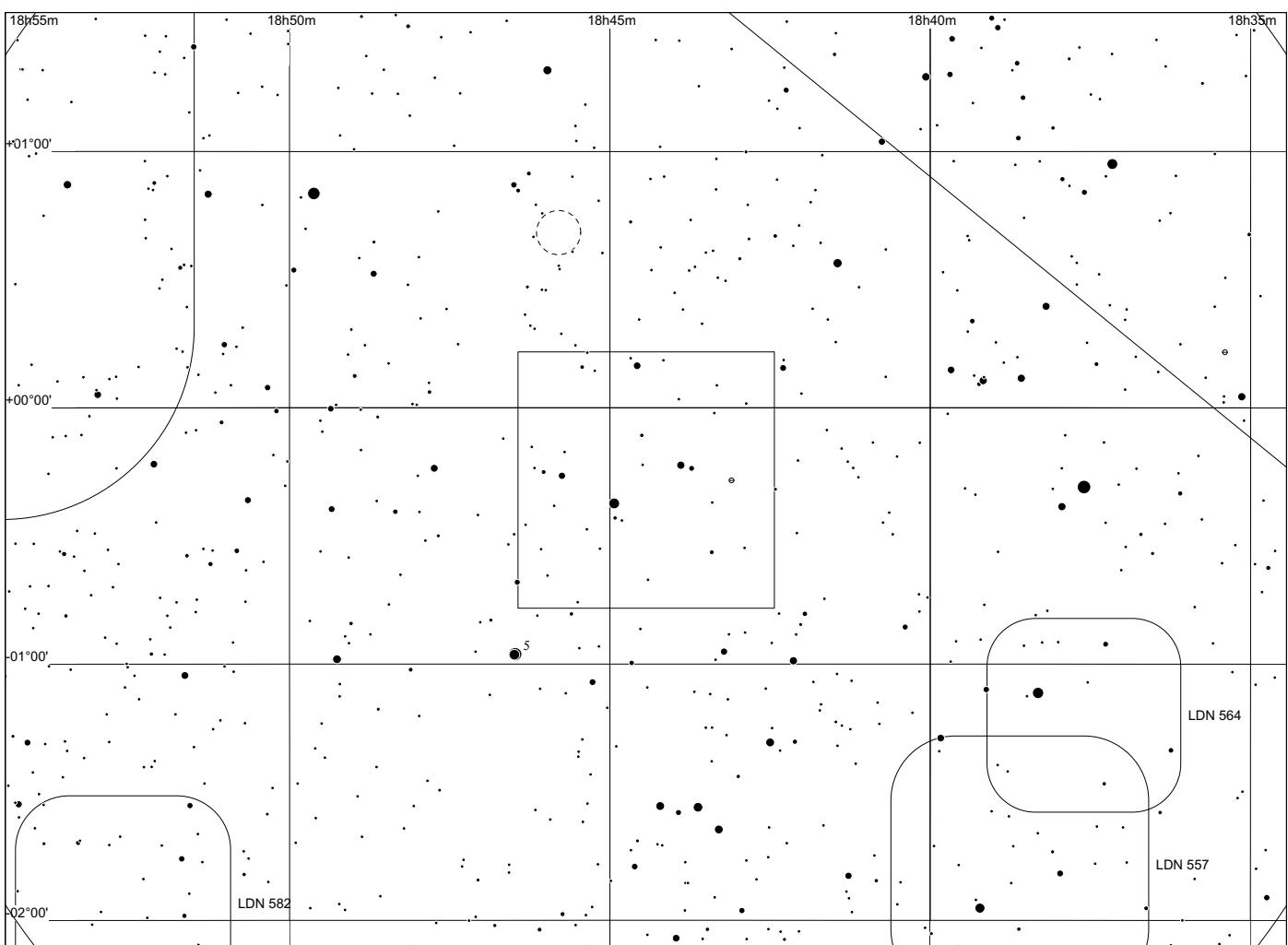
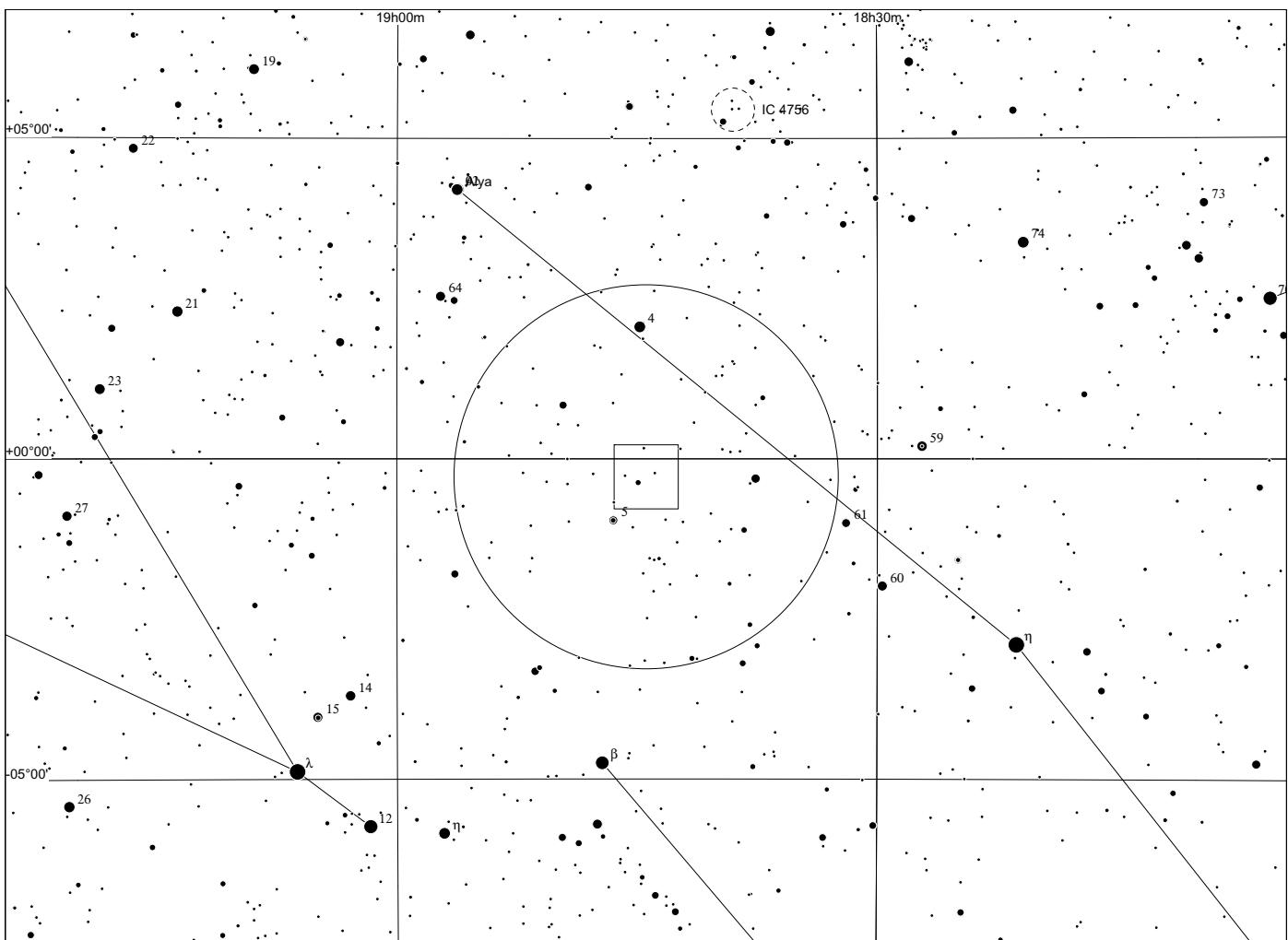
composite

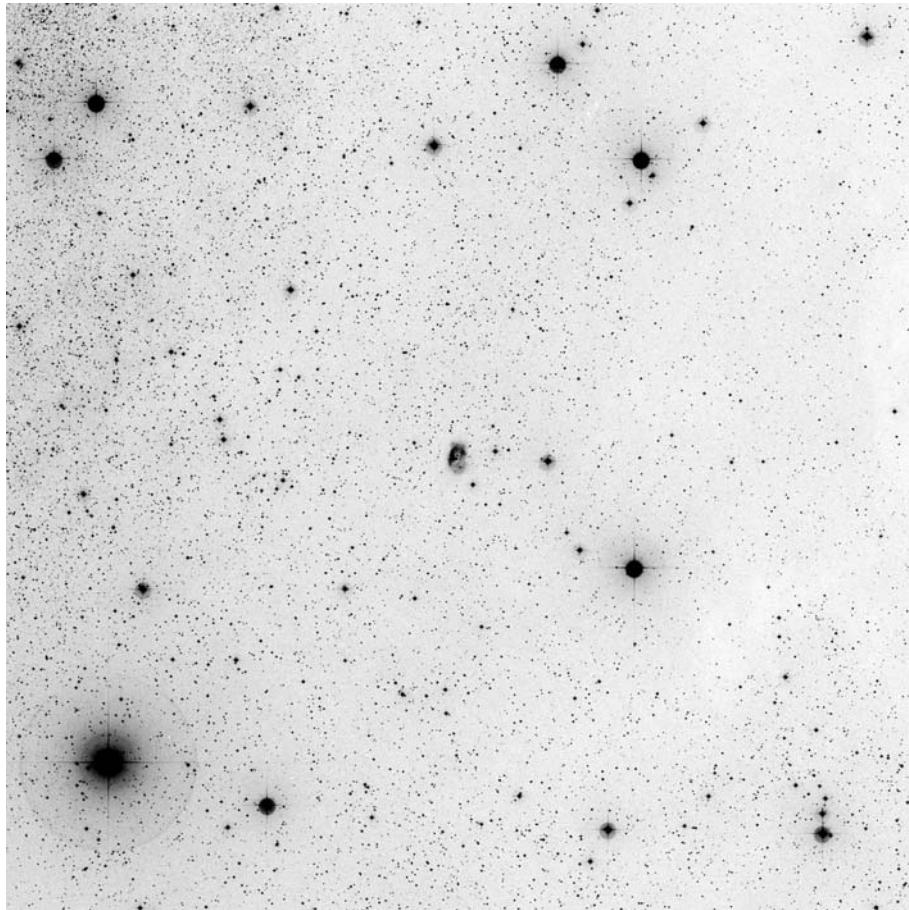
	other name	RA	dec	dia. '	F	S	B
Sh 2-069		18 44 26.1	-00 16 55	20	2	2	2

Also: RCW 177 (31.89° , 1.42°) Distance: 3800 pc, Size: 22.1 pc Source: 2003A&A...397..133R

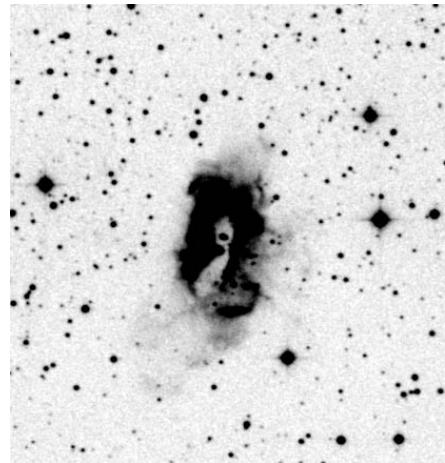
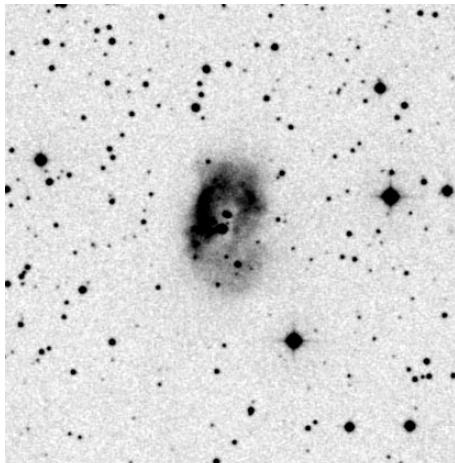
Excited by the B0.5 IV star S69-2, which SIMBAD says should be called [F89b] S69 2.

Observing notes:





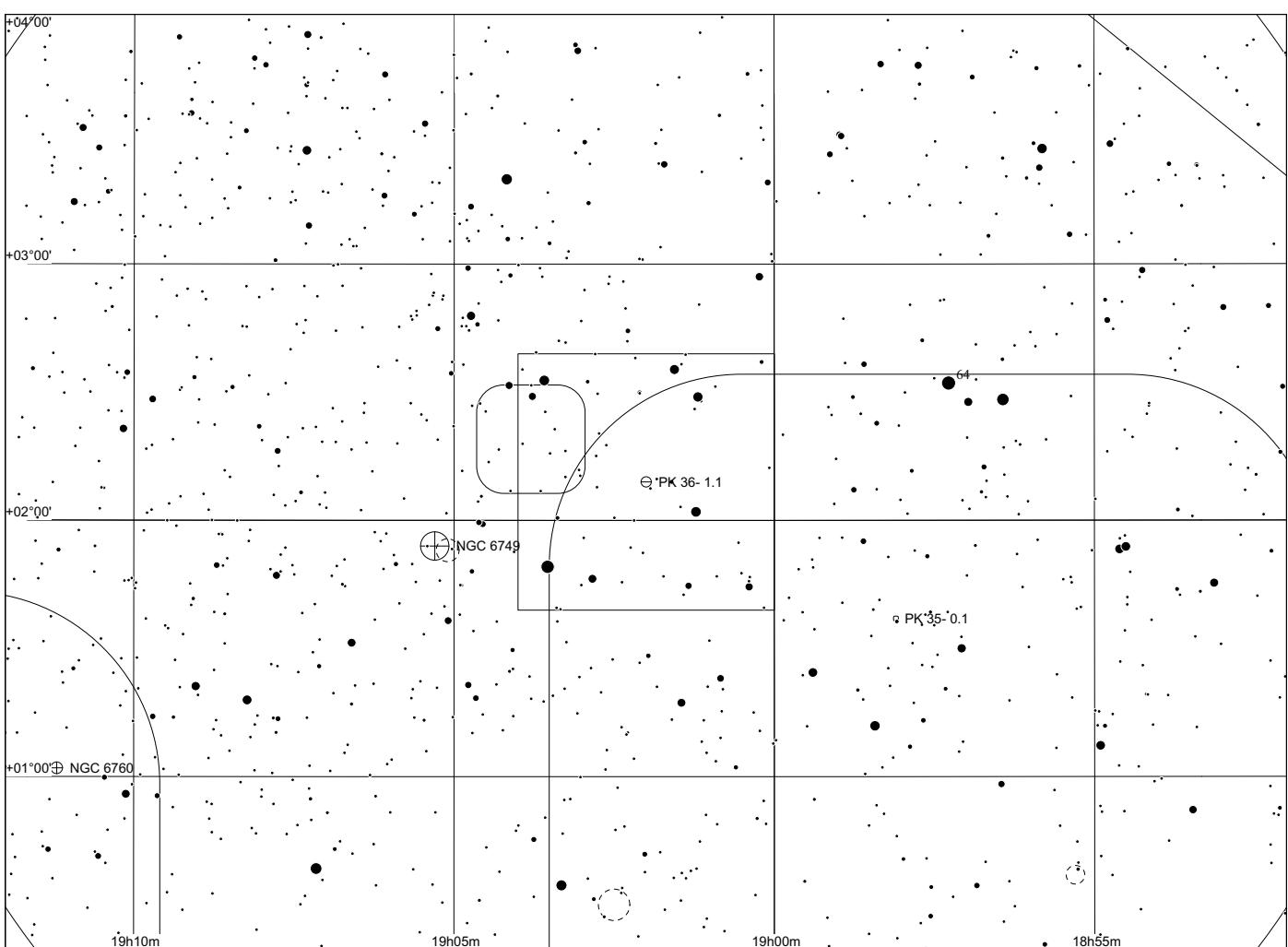
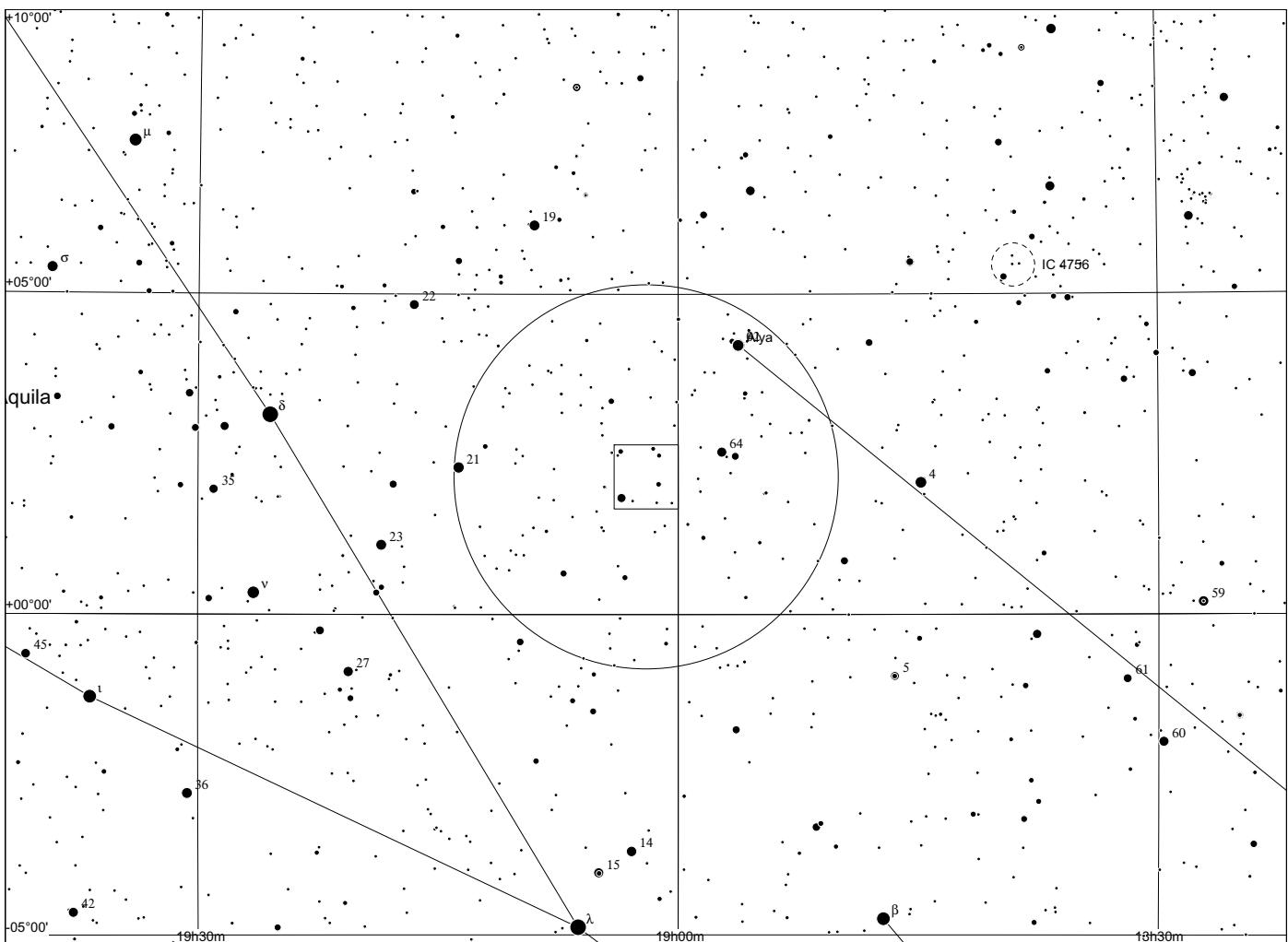
Sh 2 - 71
in Aquila

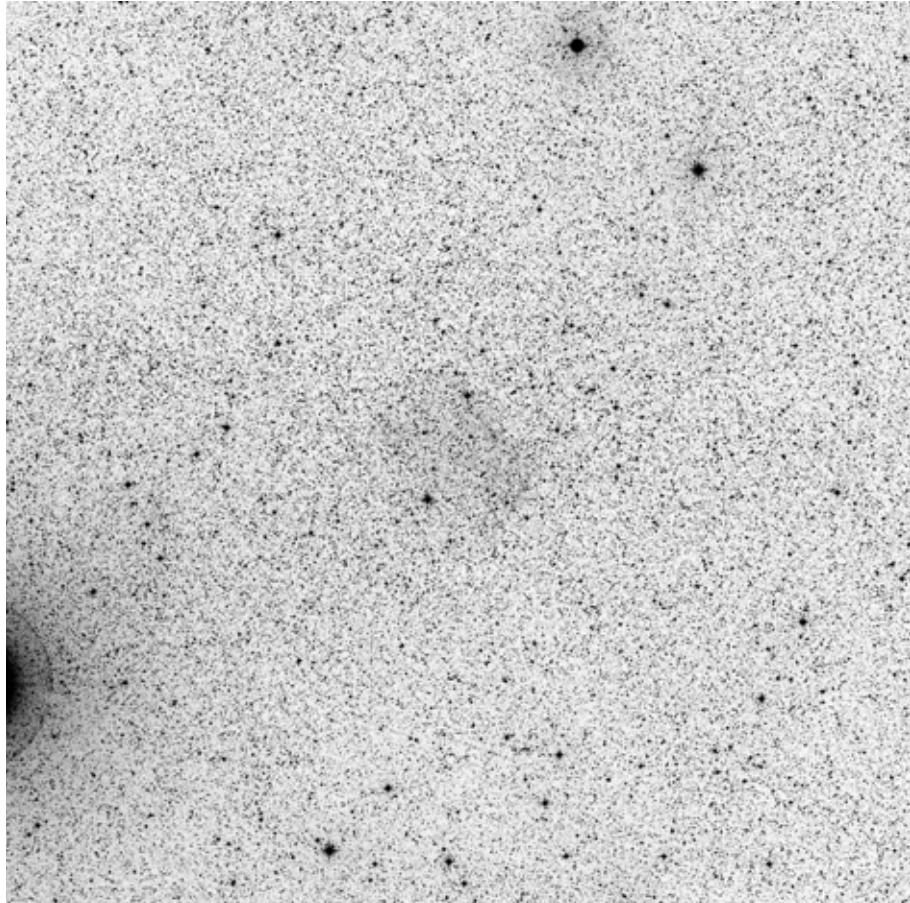


	other name	RA	dec	dia. '	F	S	B
Sh 2-071		19 02 02.3	+02 09 35	3	2	2	3

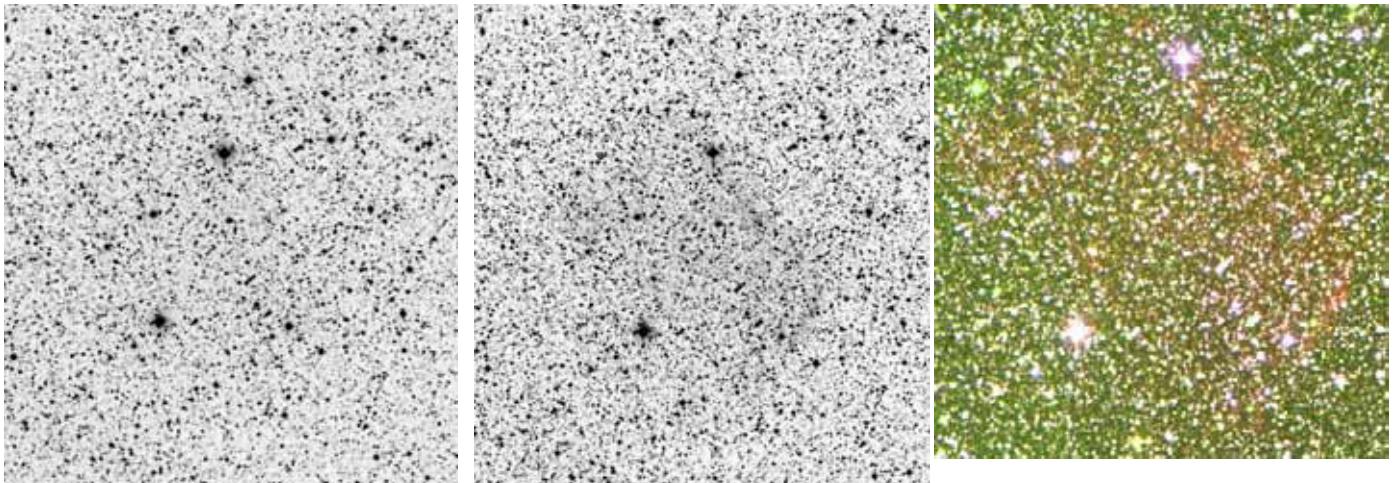
This is an unusual planetary nebula that appears to have a binary central star.

Observing notes:





Sh 2 - 78
in Aquila

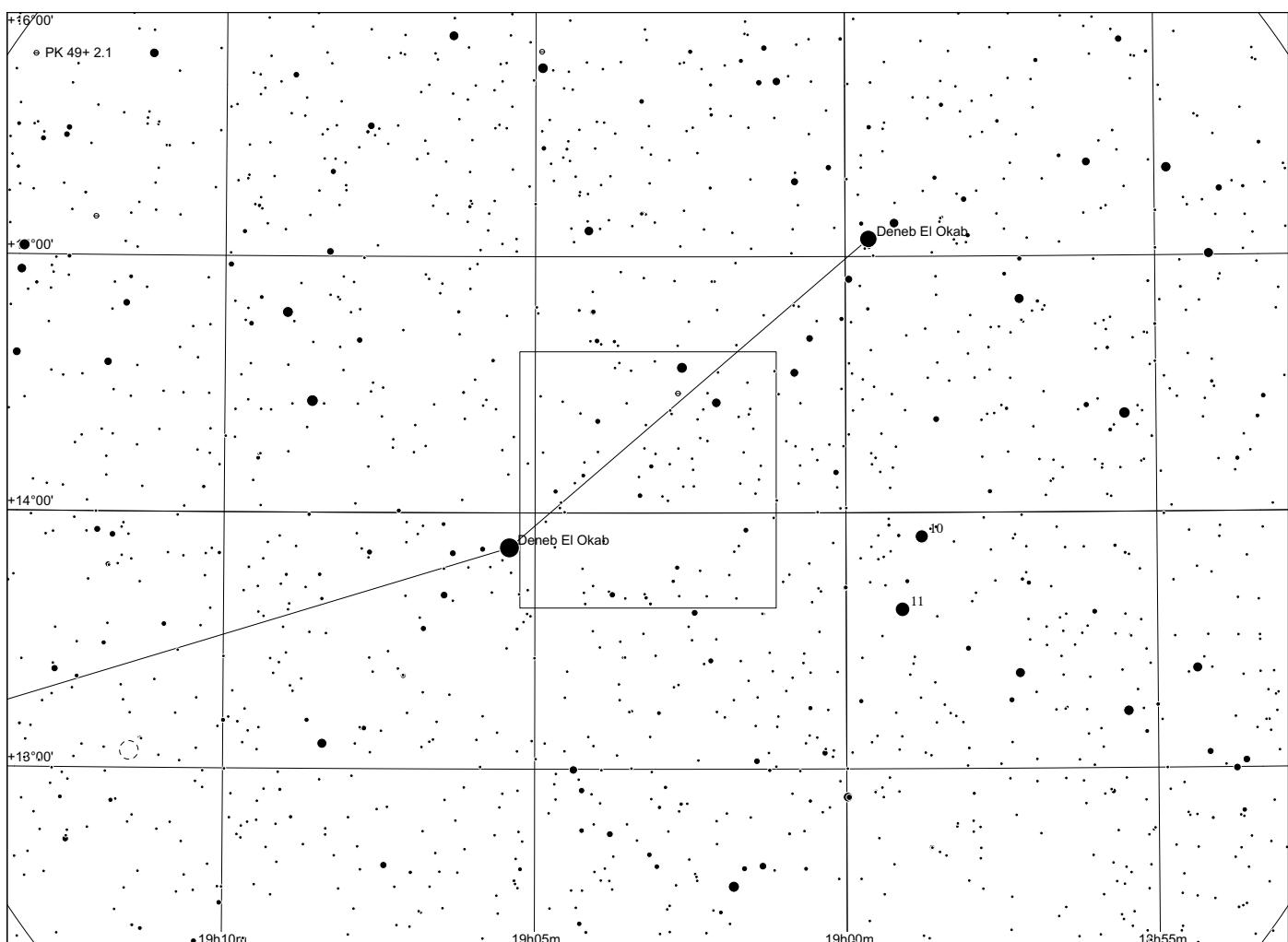
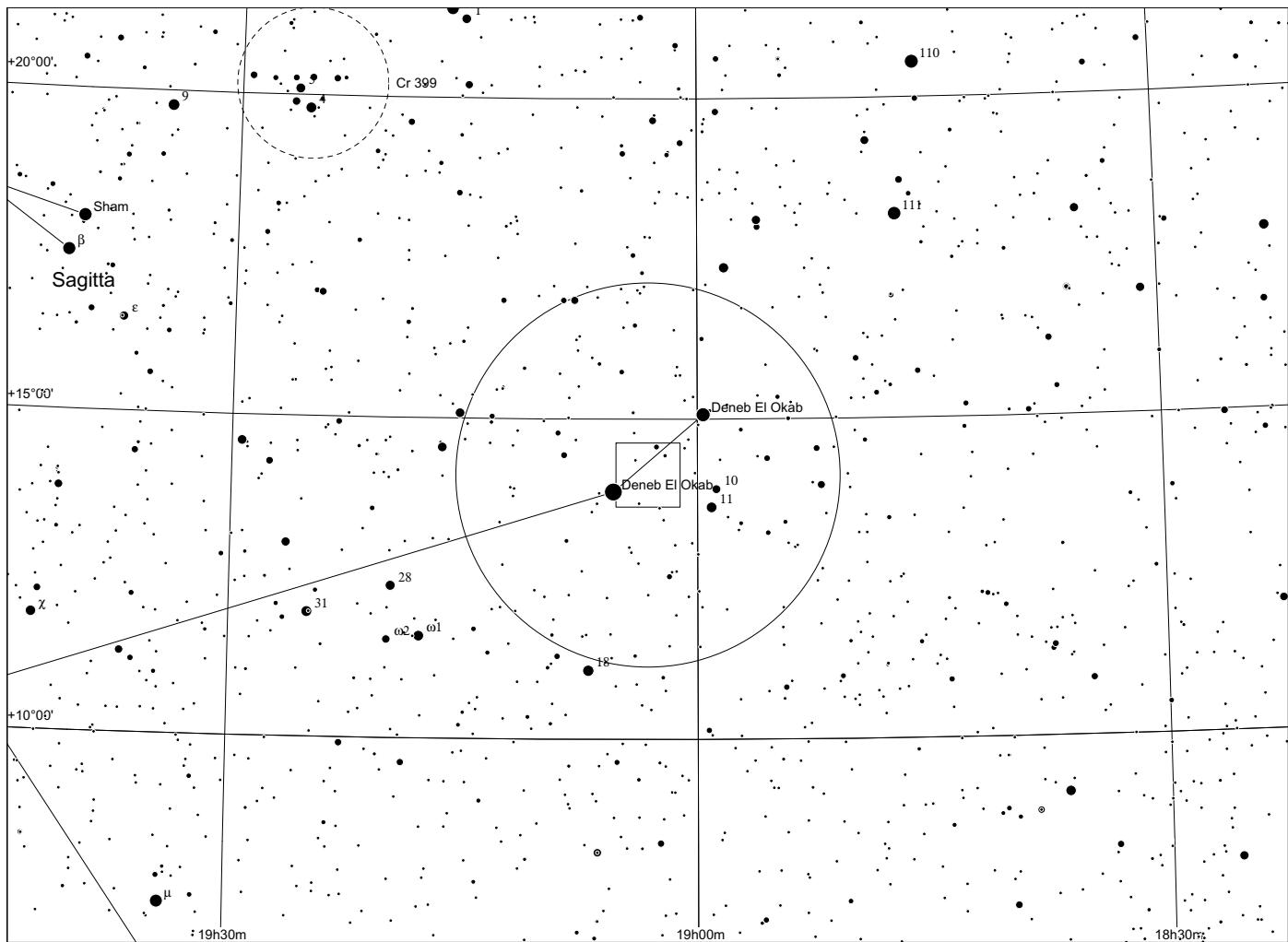


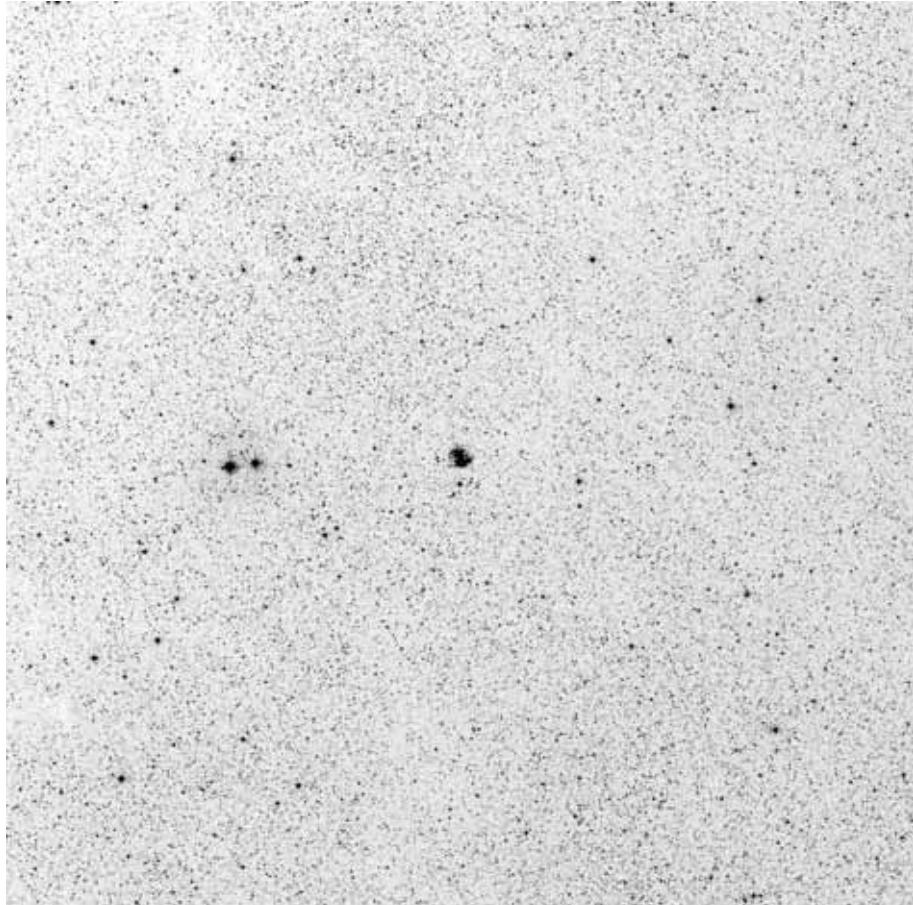
	other name	RA	dec	dia. '	F	S	B
Sh 2-078	CTSS 3, PN	19 03 10.6	+14 07 46	12	1	1	1

Distance: 4300 pc, Size: 15.0 pc, Source: 1989A&AS...77..439F

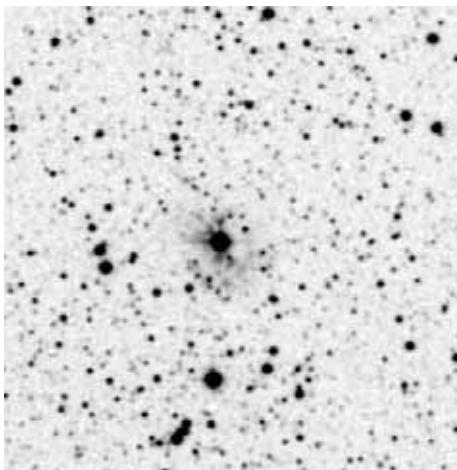
This is the old planetary nebula CTSS 3 and actually lies at a distance of 700 parsecs.

Observing notes:

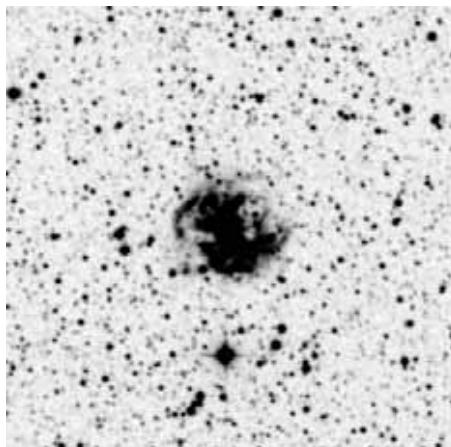




**Sh 2 - 80
in Sagitta**



POSS blue



POSS red



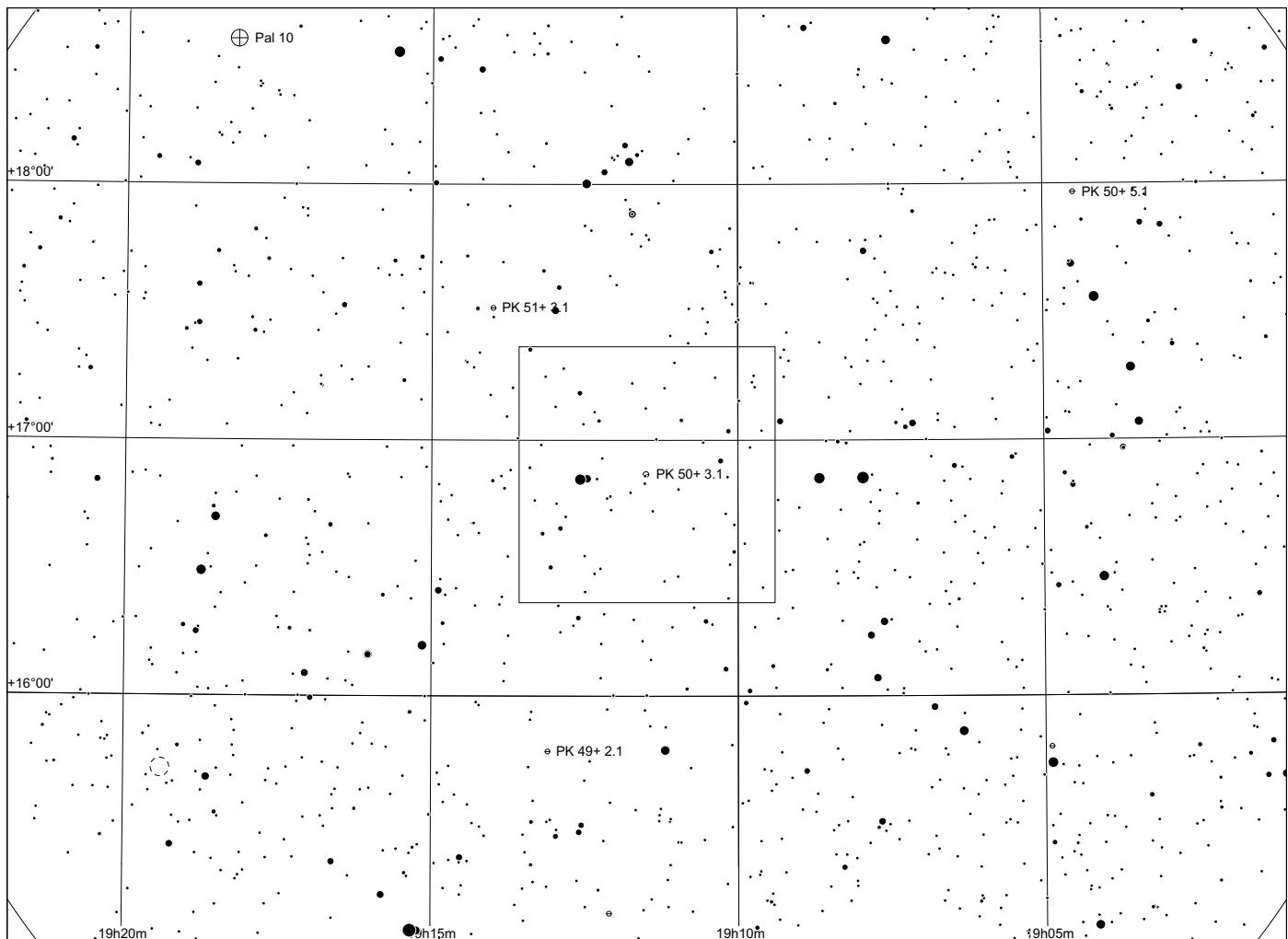
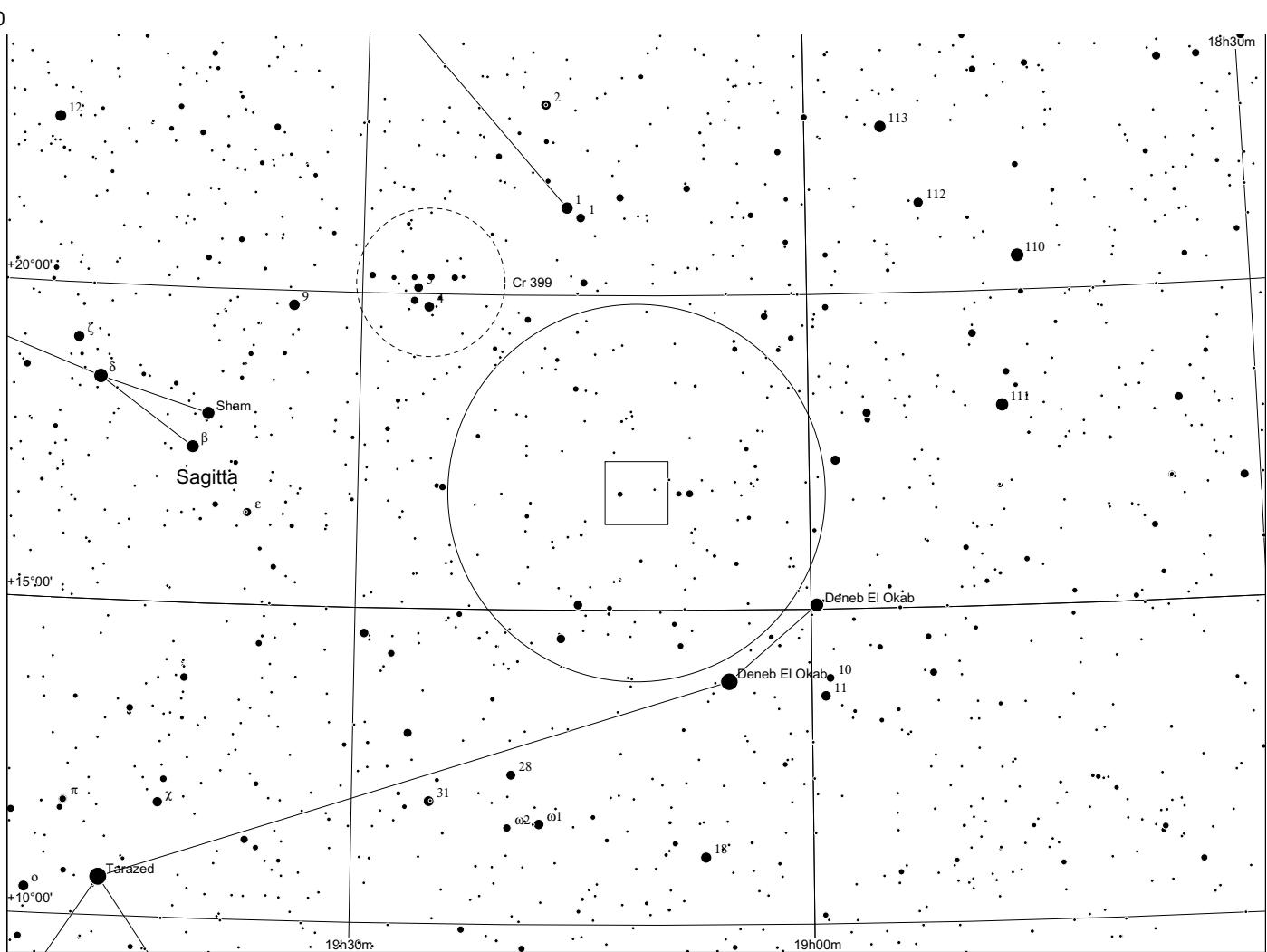
composite

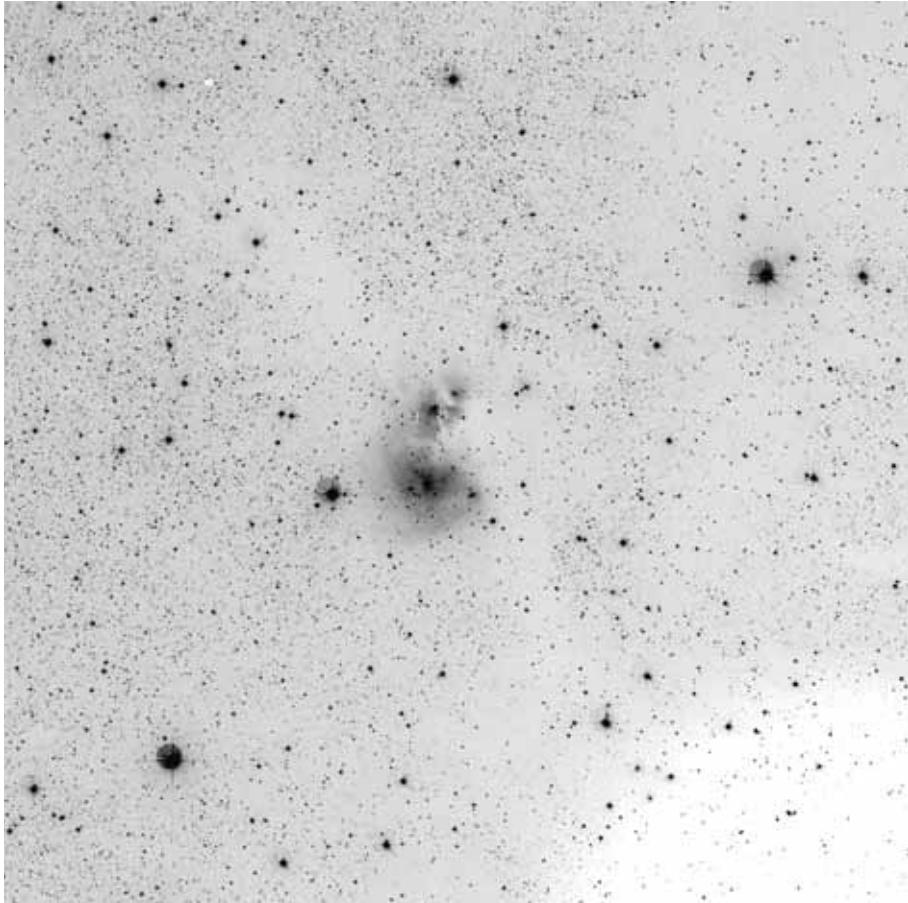
	other name	RA	dec	dia. '	F	S	B
Sh 2-080	M1-67, WR shell	19 11 28.5	+16 51 57	2	3	2	3

Distance: 6400 pc, Size: 3.7 pc Source: 2000A&A...360..227N

This is a ring nebula surrounding the Wolf Rayet star WR 124, also known as Merrill's star.

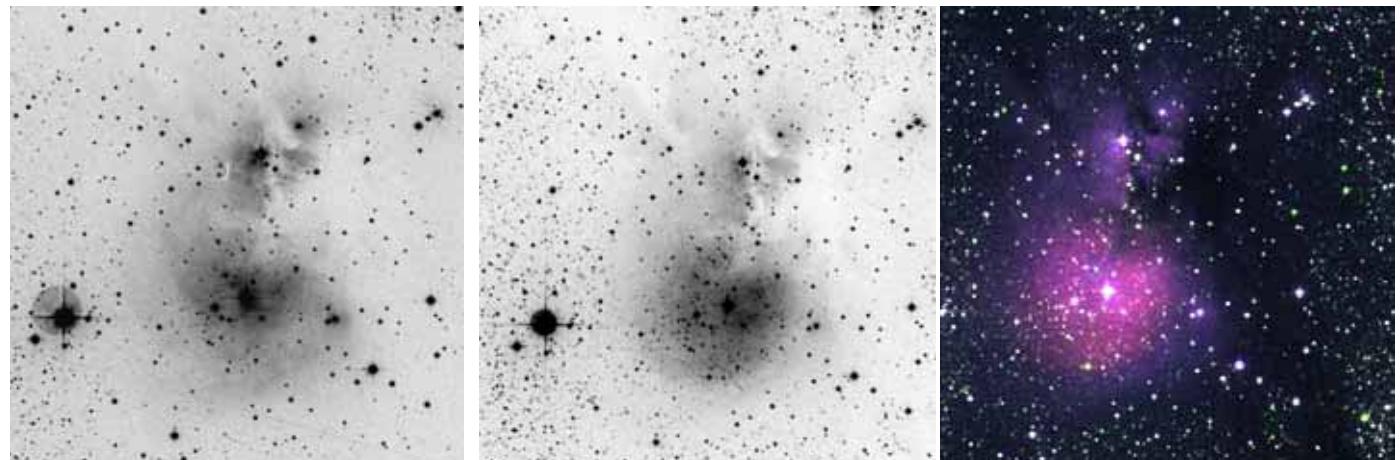
Observing notes:





**Sh 2 - 82
in Sagitta**

60x60, blue



POSS blue

POSS red

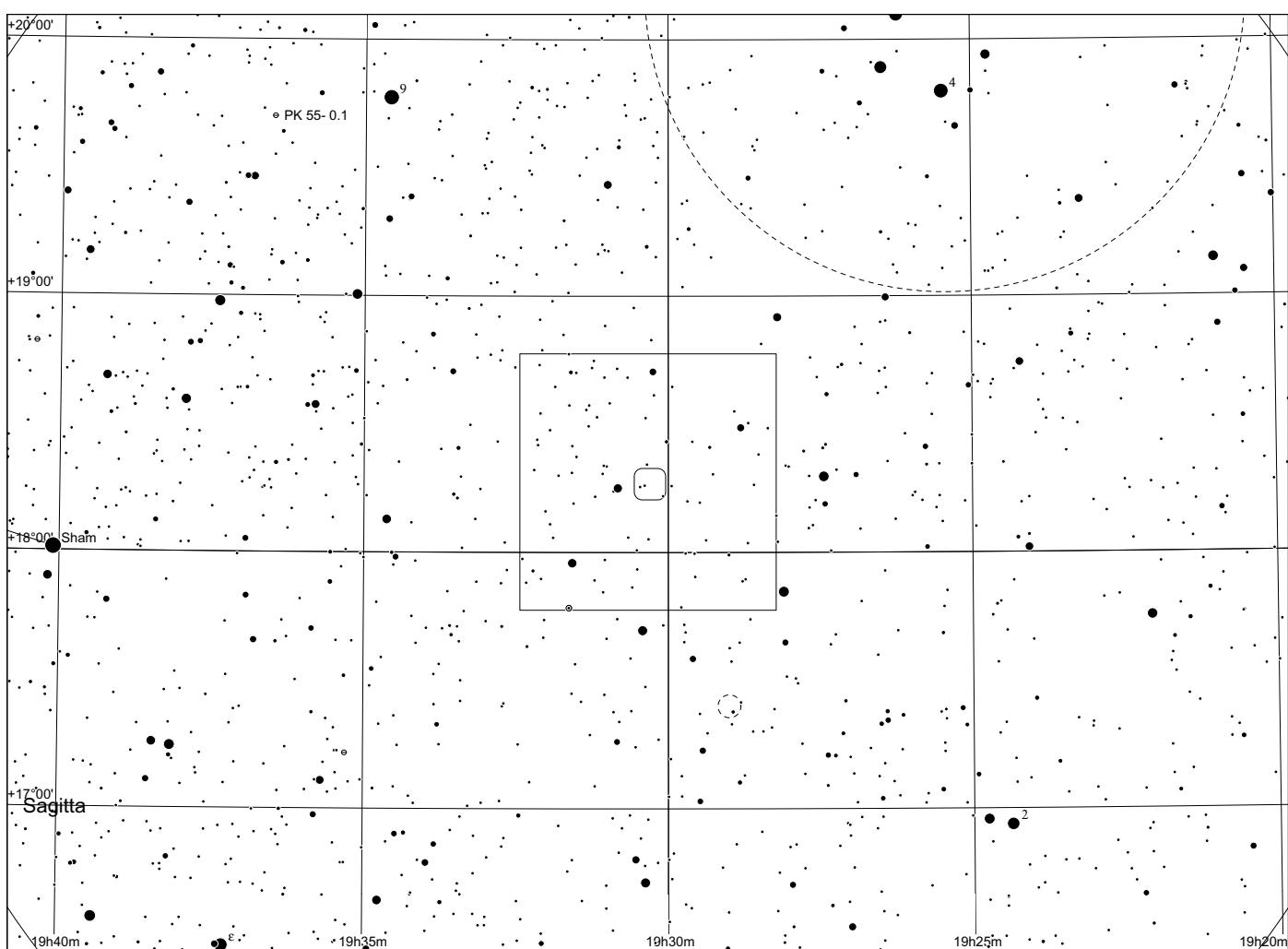
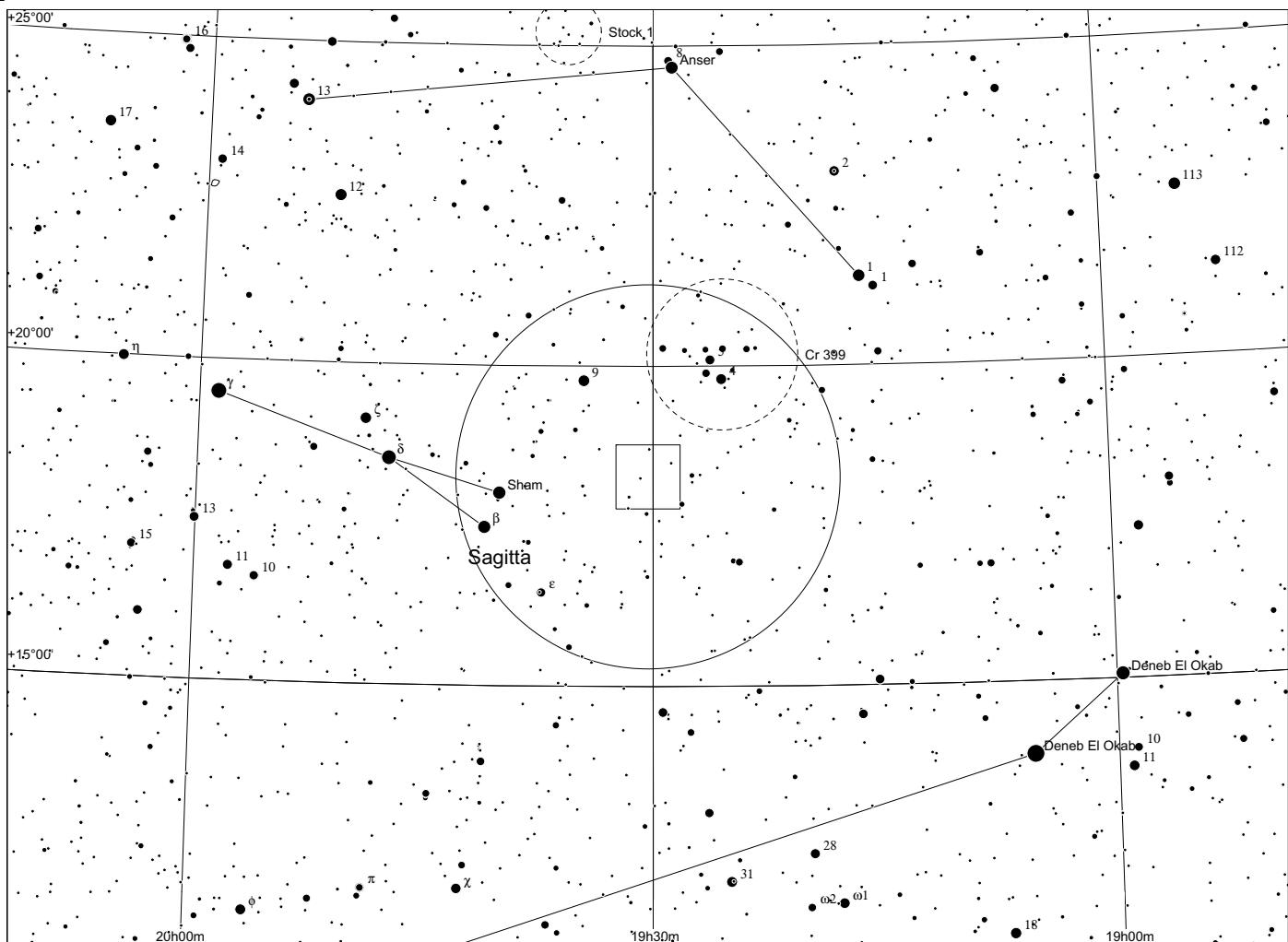
composite

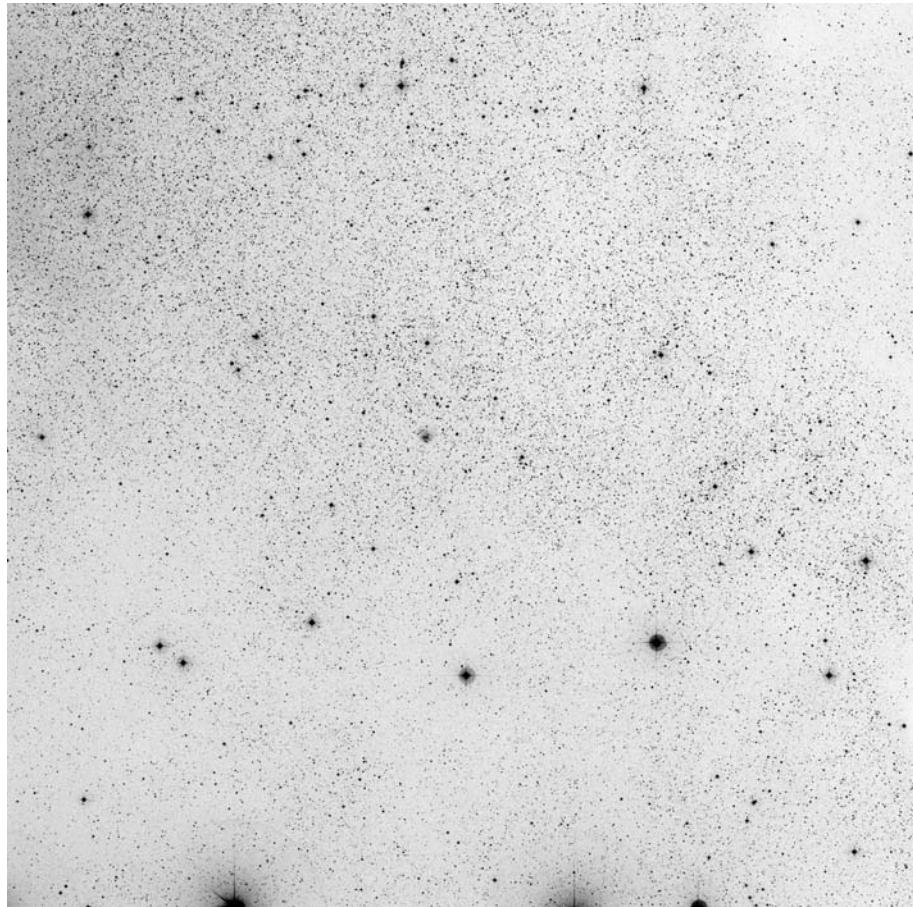
	other name	RA	dec	dia. '	F	S	B
Sh 2-082		19 30 20.4	+18 16 31	9	3	1	2

Distance: 1100 pc, Size: 2.9 pc Source: 1982ApJS...49..183B

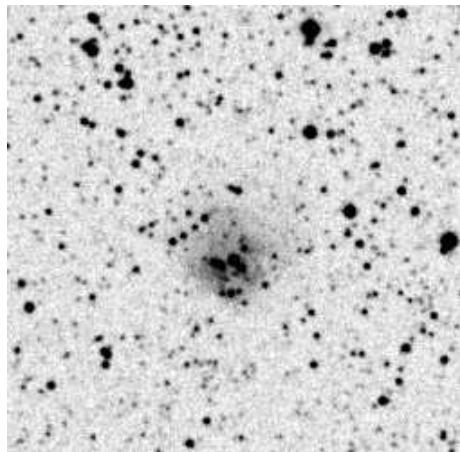
This combination HII region and reflection nebula, also called LBN 129 and DG 159, is ionised by the B0.5V star HD 231616. With the current distance estimate, it appears to be near the Vulpecula OB4 association.

Observing notes:

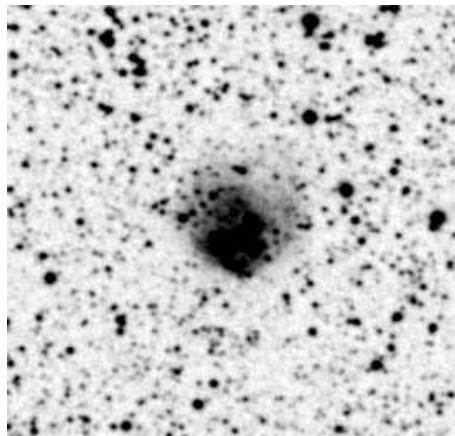


Sh 2 - 83**in Vulpecula**

60x60, blue



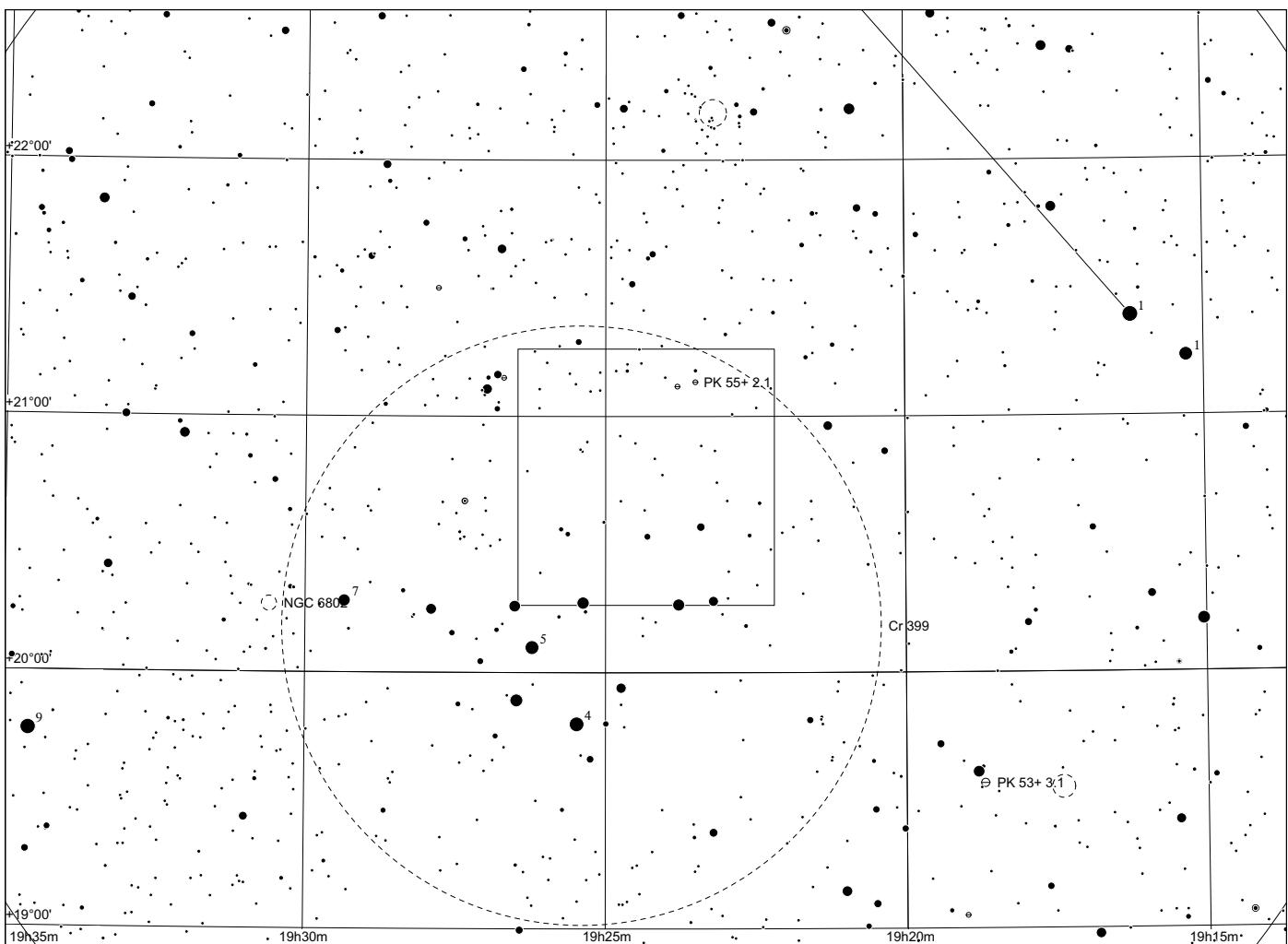
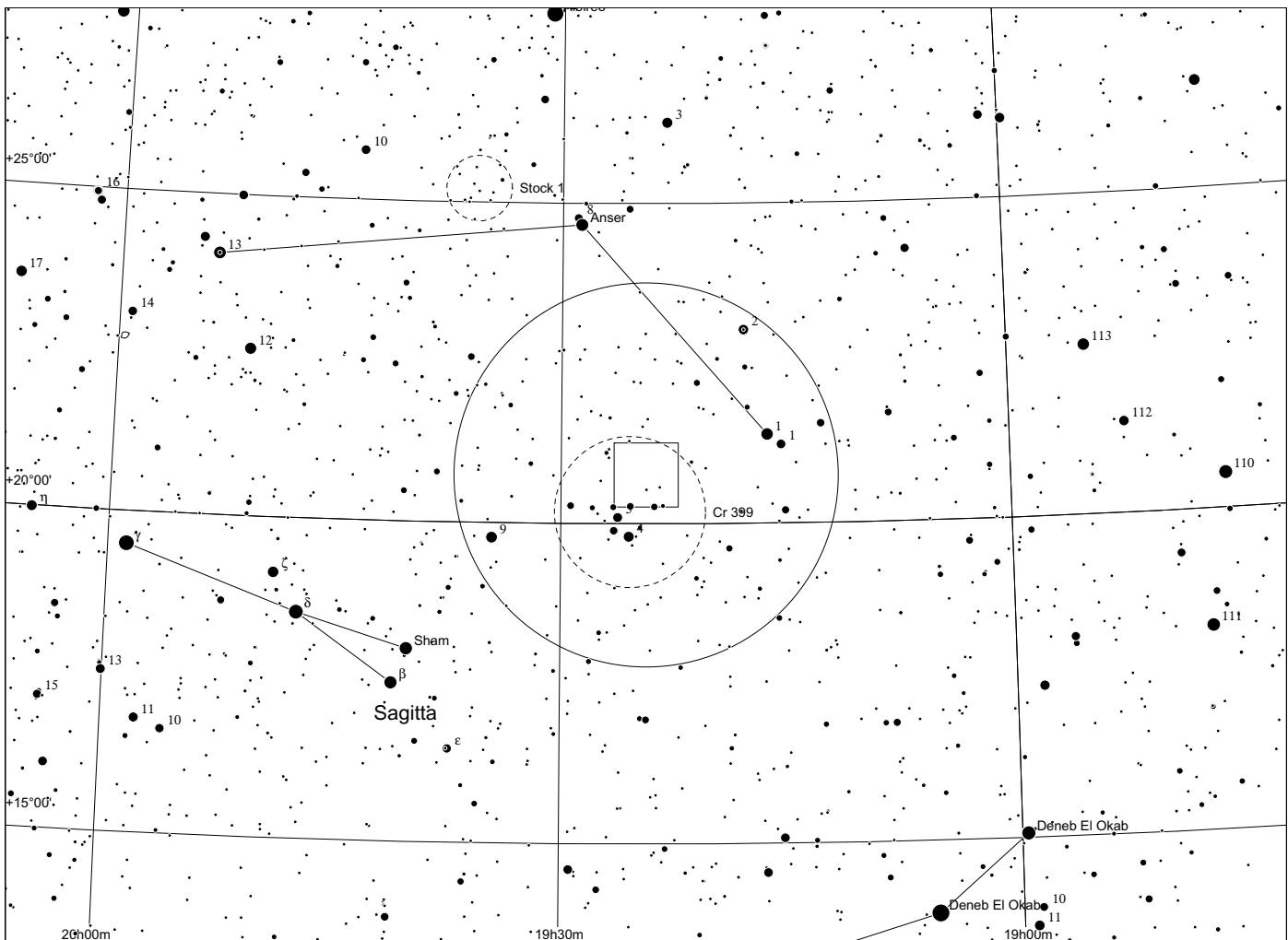
POSS blue

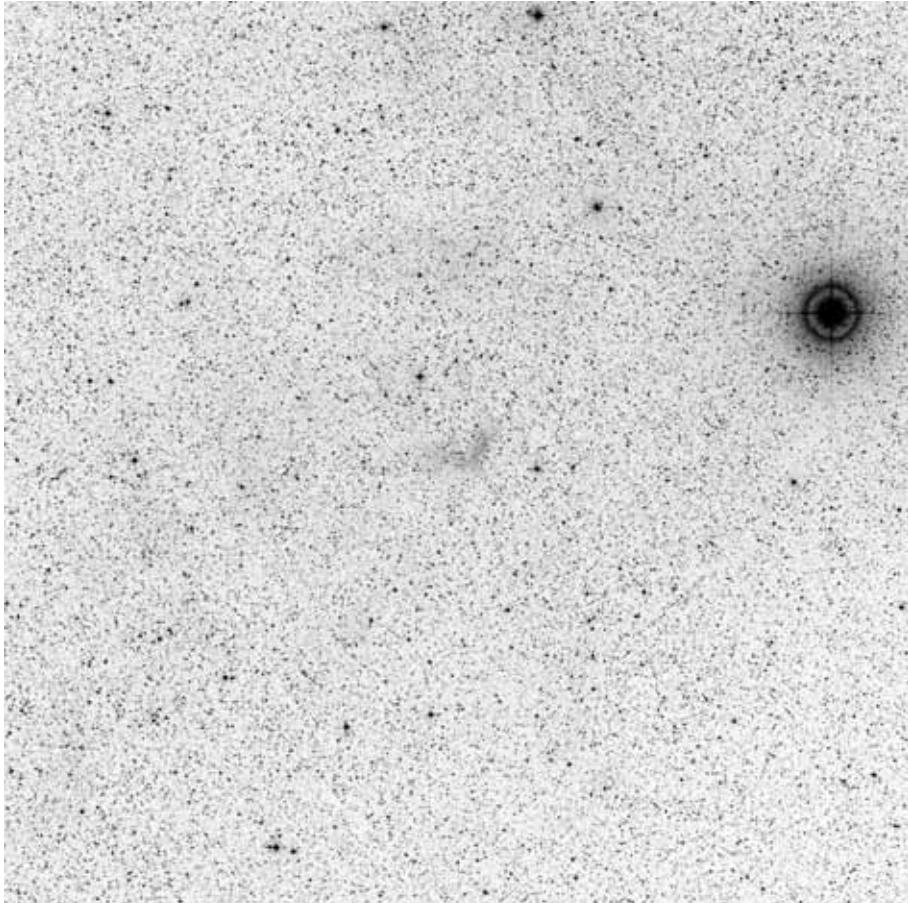


POSS red

	other name	RA	dec	dia.	'	F	S	B
Sh 2-083		19 24 32.1	+20 47 45	2		1	2	2

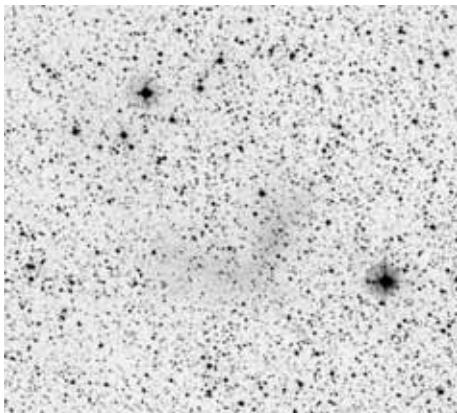
Observing notes:



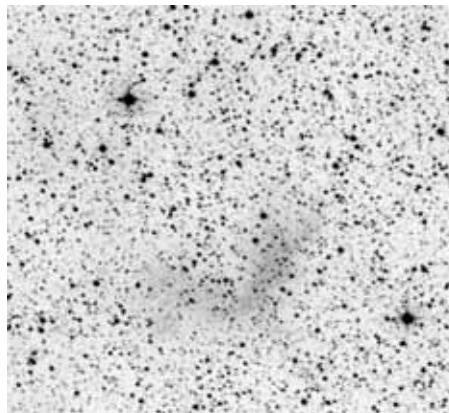


**Sh 2 - 84
in Sagitta**

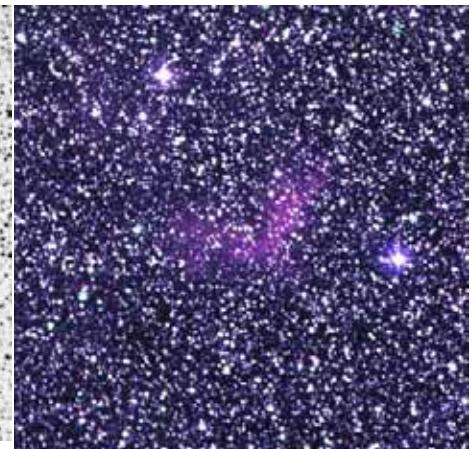
60x60, red



POSS blue



POSS red



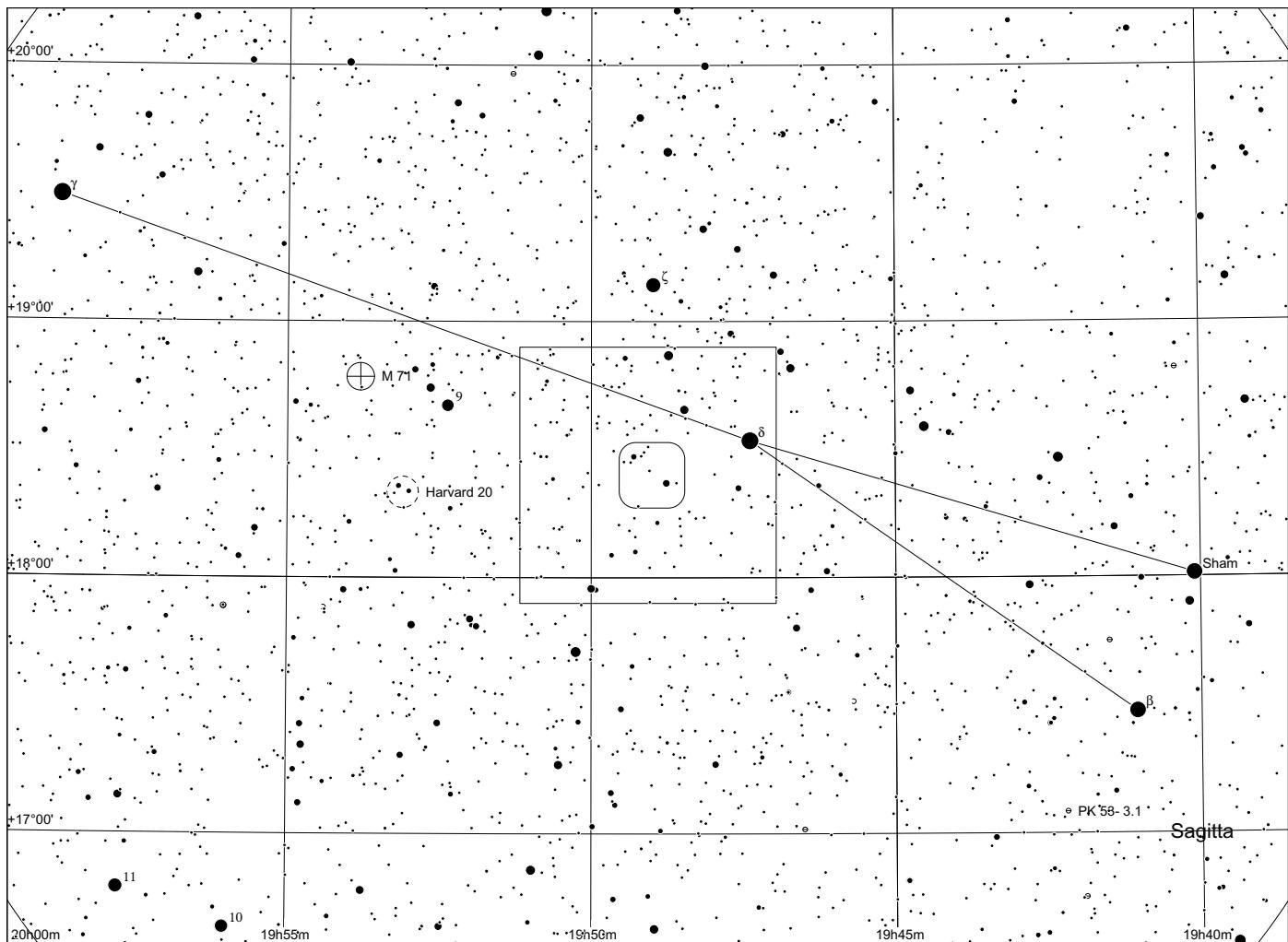
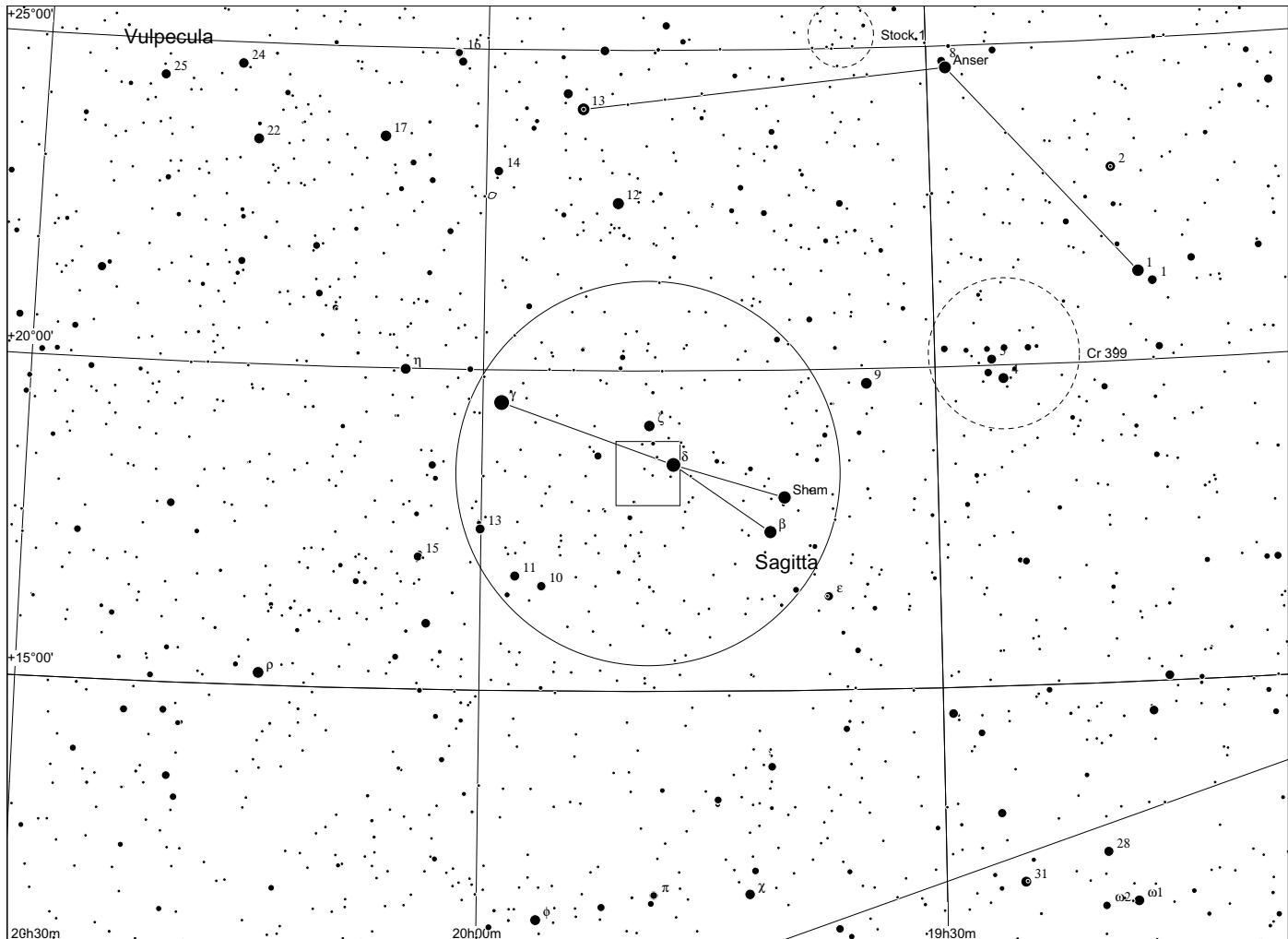
composite

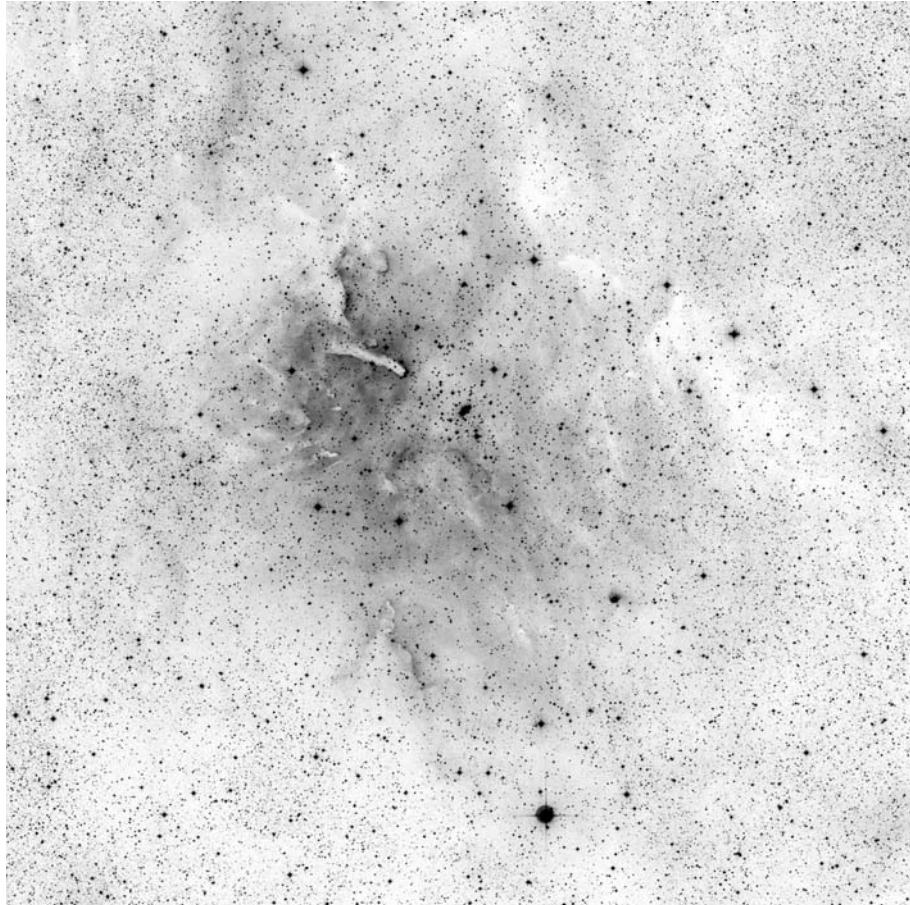
	other name	RA	dec	dia. '	F	S	B
Sh 2-084		19 49 04.0	+18 24 01	15	3	2	3

Distance: 5000 pc, Size: 21.8 pc Source: 1982ApJS...49..183B

This nebula, also called LBN 131, is near in the sky to the Wolf-Rayet star WR 128, and Sharpless associated the two objects in his catalog. However, there is some controversy about whether Sh 2-84 is part of the ring nebula surrounding this star or lies at another distance.

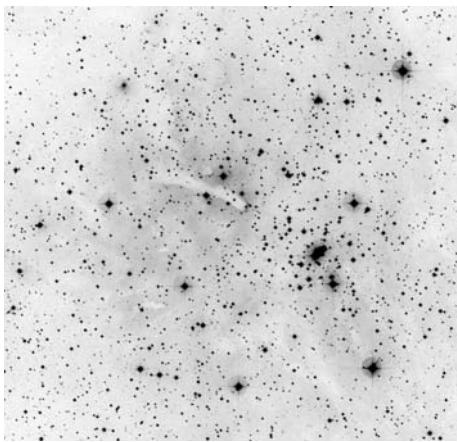
Observing notes:



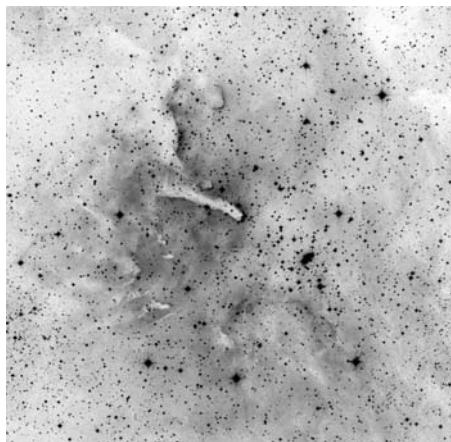


**Sh 2 - 86
in Vulpecula**

60x60, red



POSS blue



POSS red



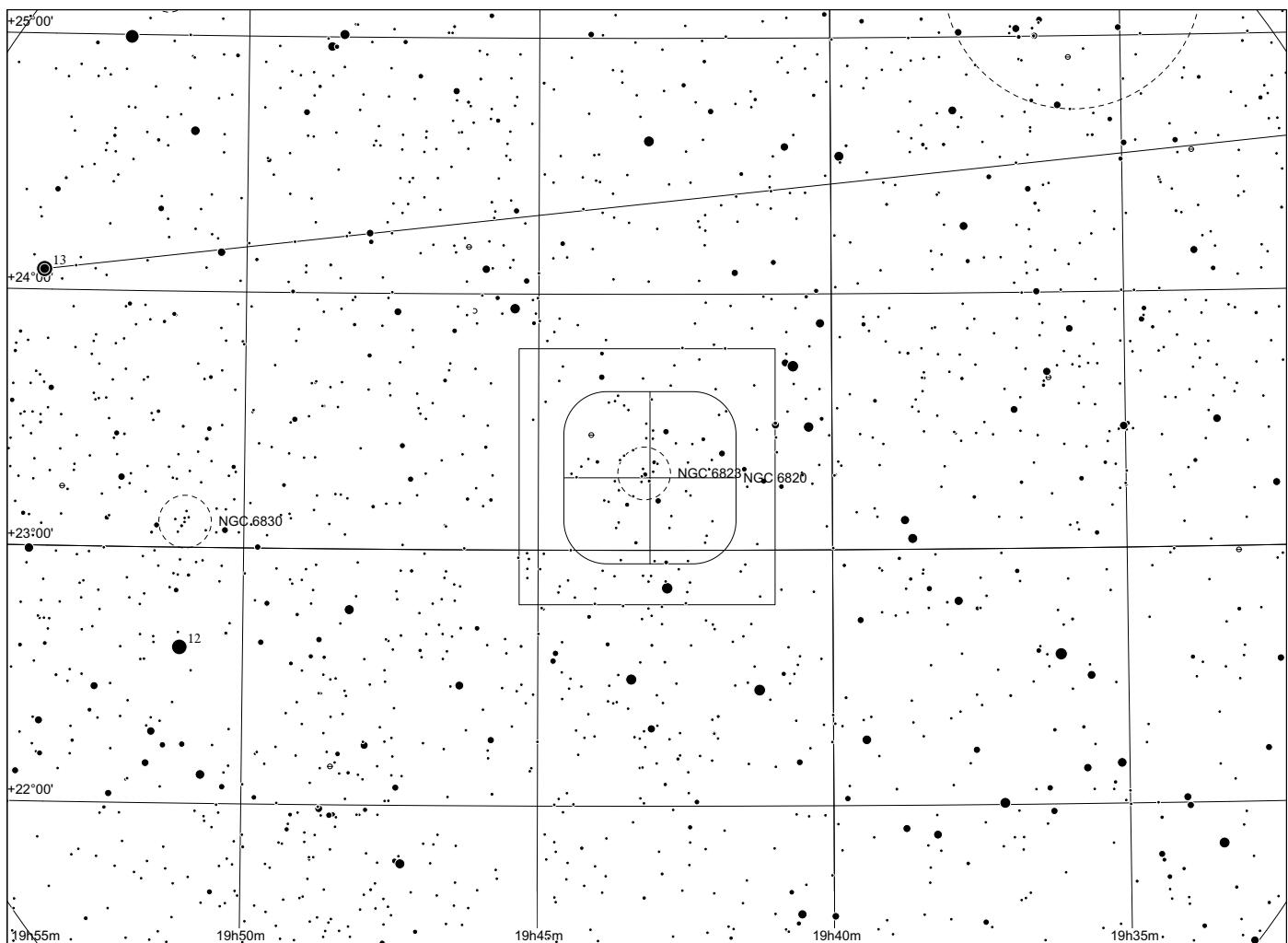
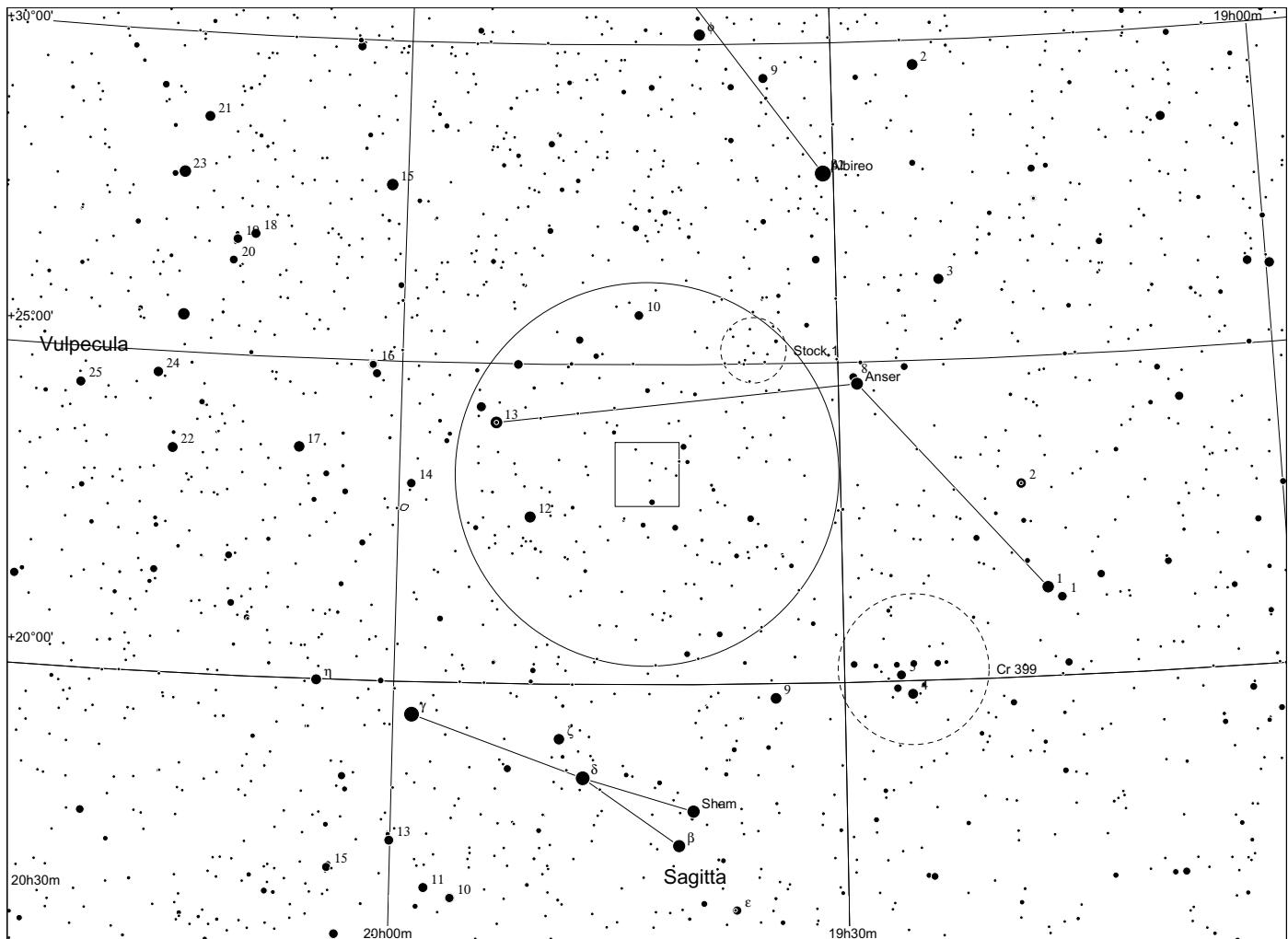
narrowband Dean Salman

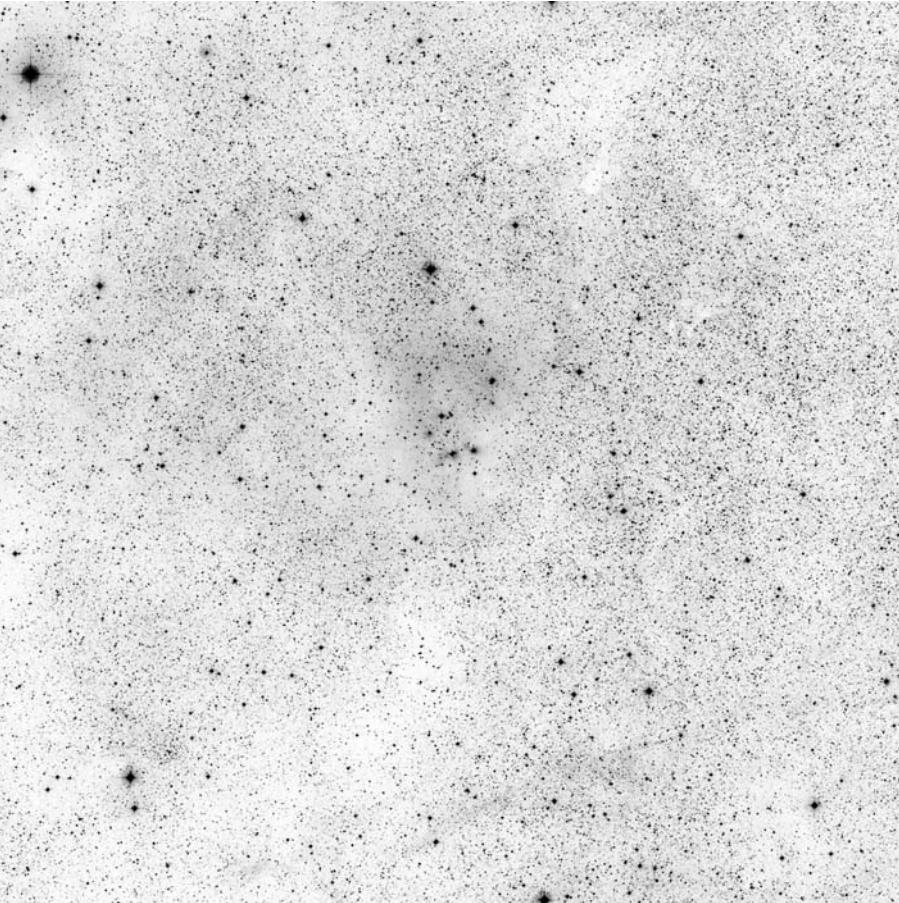
	other name	RA	dec	dia. '	F	S	B
Sh 2-086	NGC6820	19 43 08.8	+23 17 15	40	1	2	2

Distance: 1900 pc, Size: 22.1 pc Source: 1982ApJS...49..183B

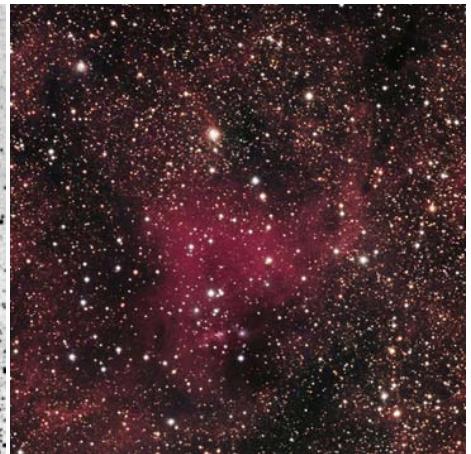
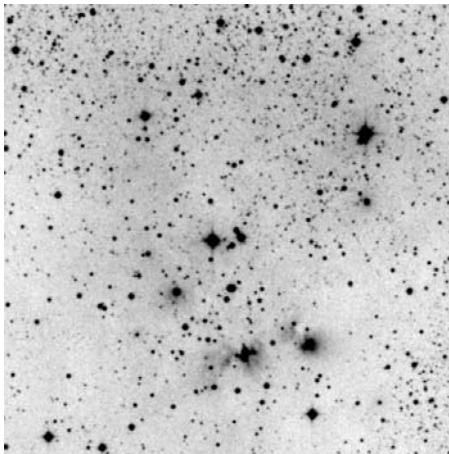
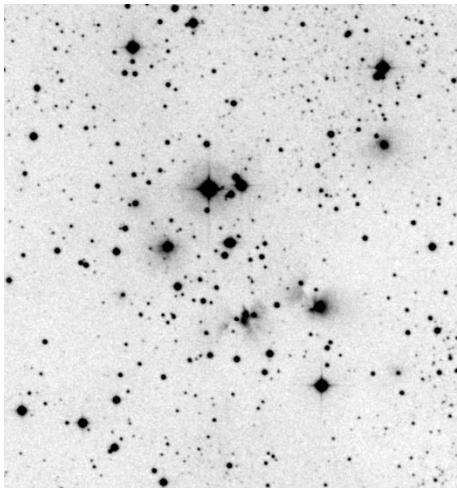
NGC 6820 is the radio source W55 and is associated with the star cluster NGC 6823 and Vul OB1.

Observing notes:





Sh 2 - 87
in Vulpecula



POSS blue

POSS red

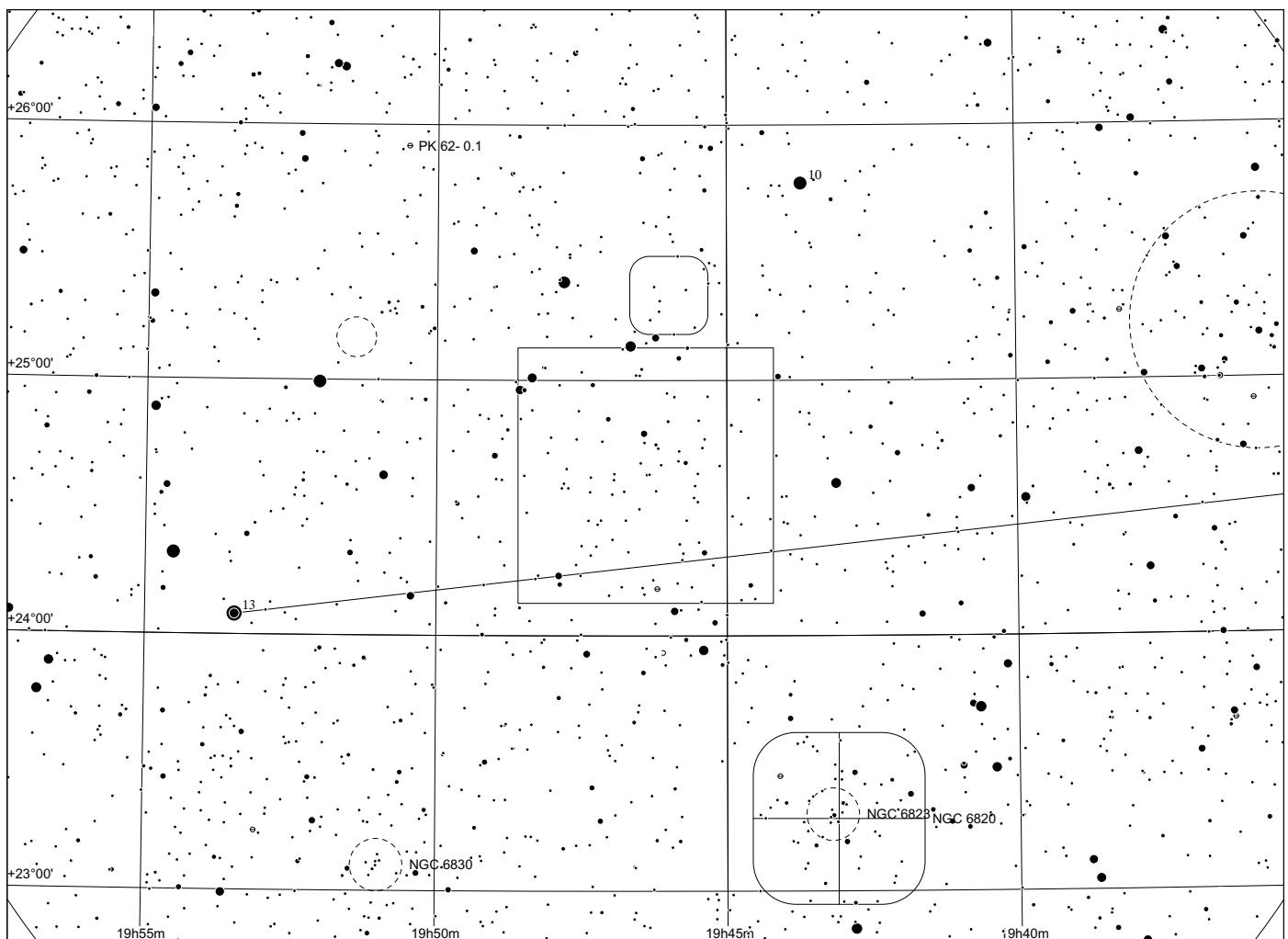
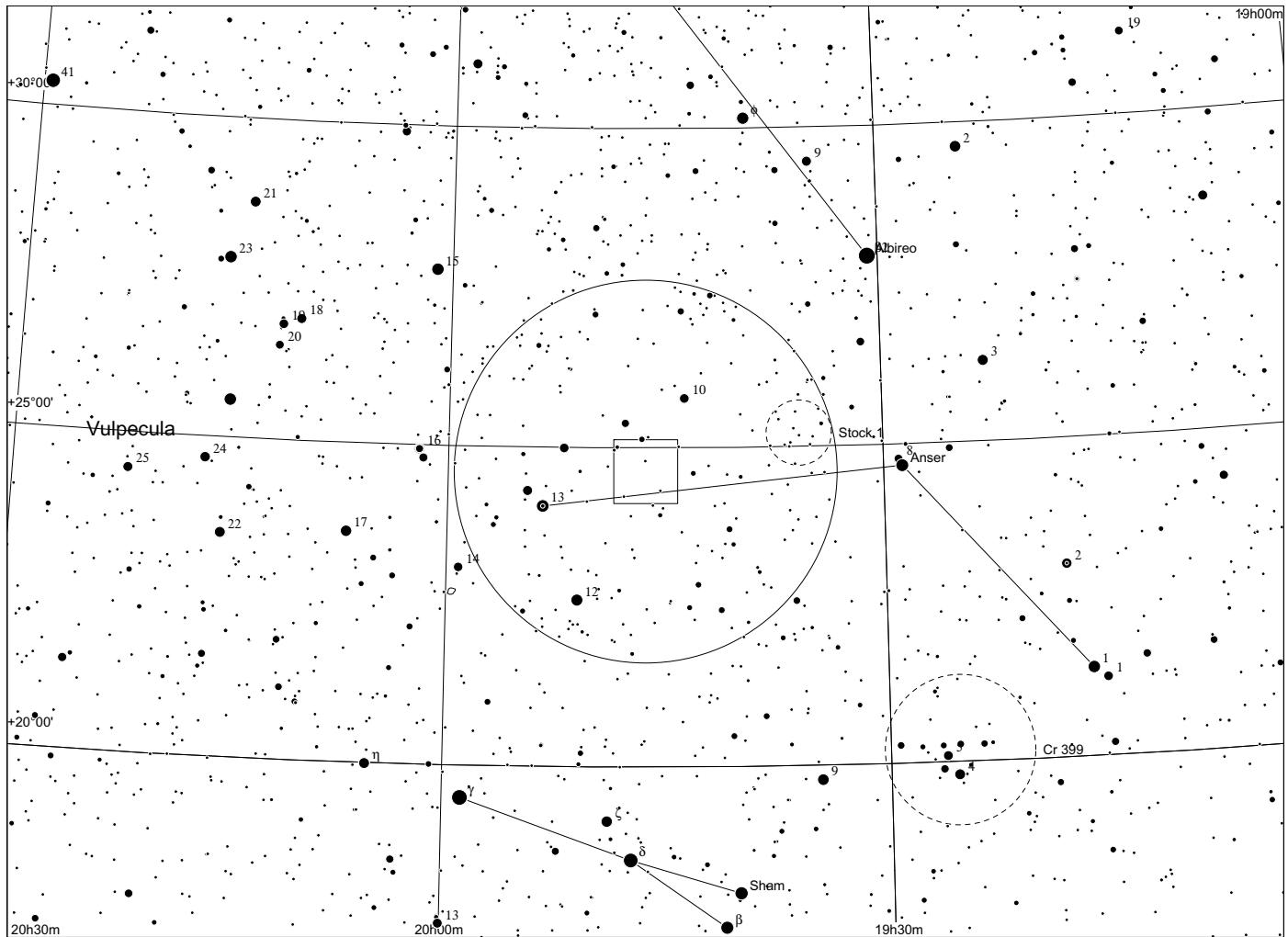
RGB Dean Salman

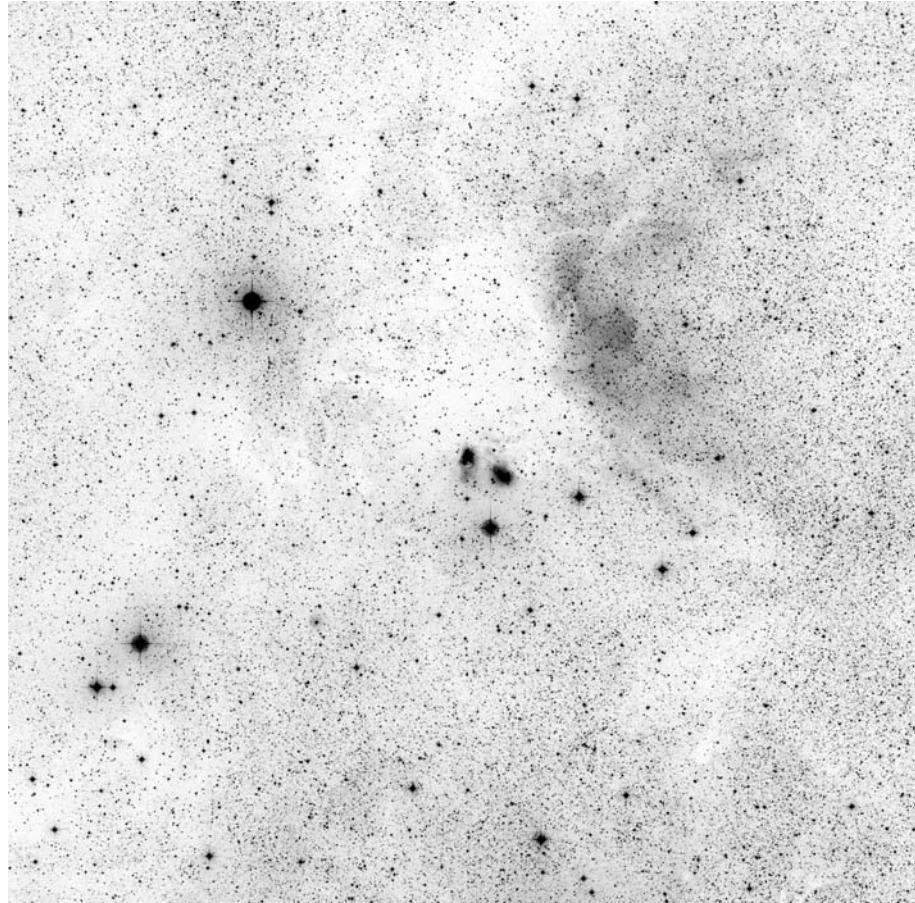
	other name	RA	dec	dia. '	F	S	B
Sh 2-087		19 46 24.4	+24 37 41	10	3	1	1

Distance: 2144 pc, Size: 2.4 pc, Source: 2003A&A...397..213P

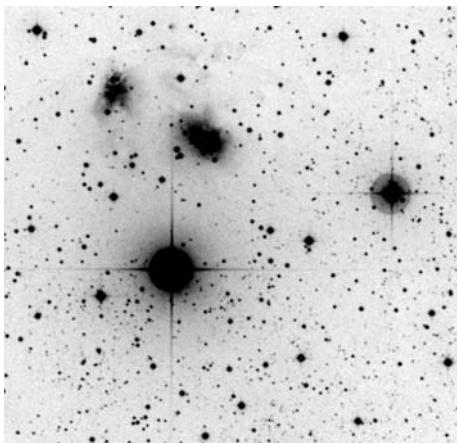
This is a massive star formation region associated with a 7000 solar mass molecular cloud and many sources in the far infrared.

Observing notes:

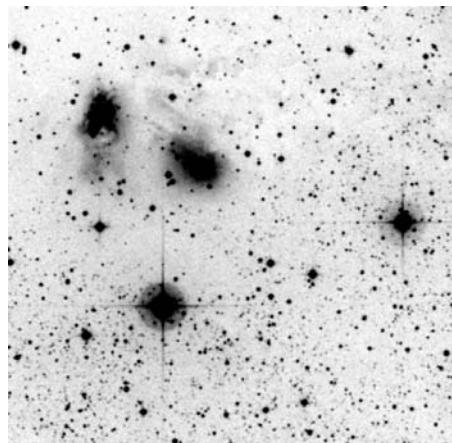




Sh 2 - 88
in Vulpecula



POSS blue



POSS red



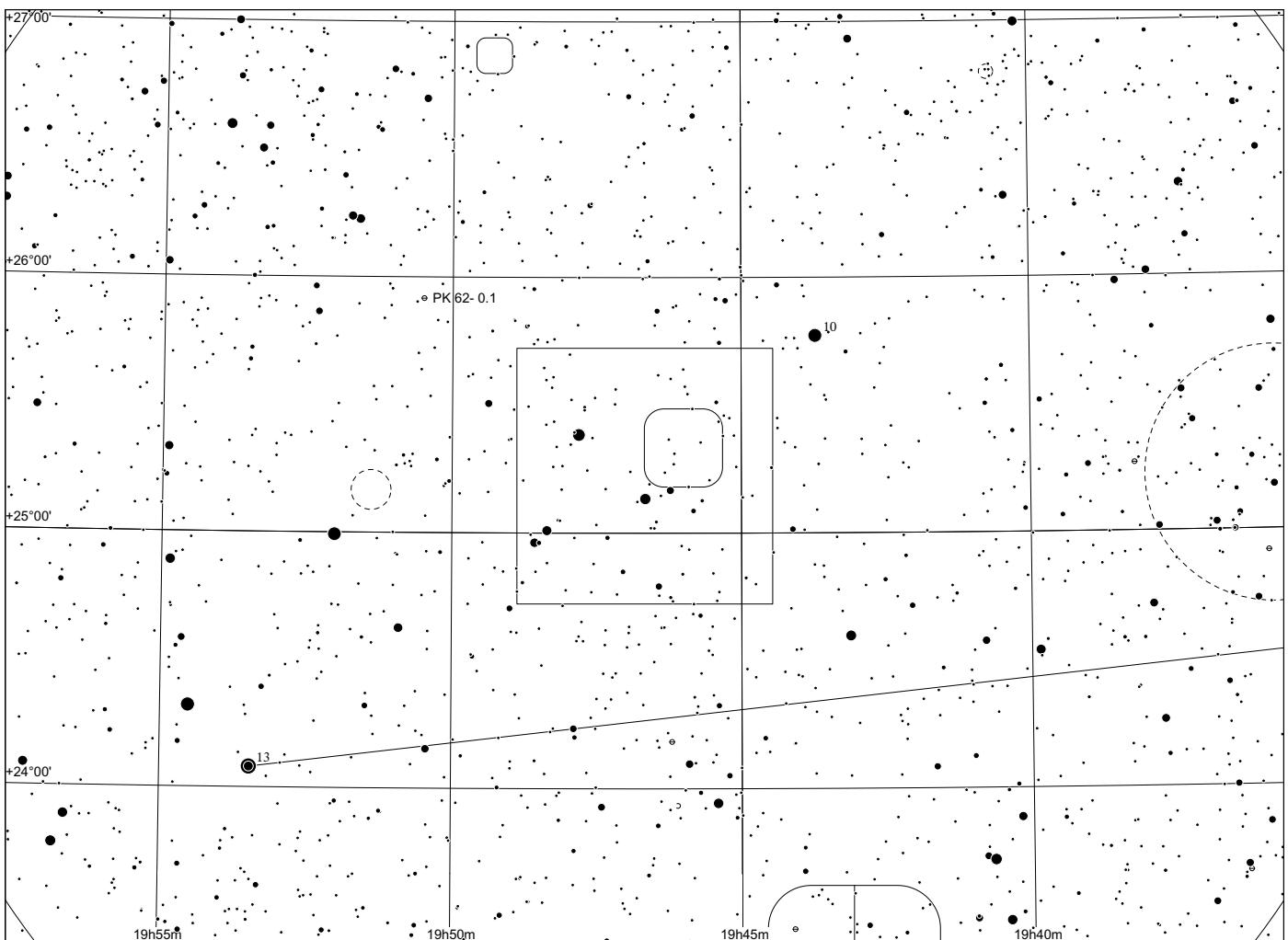
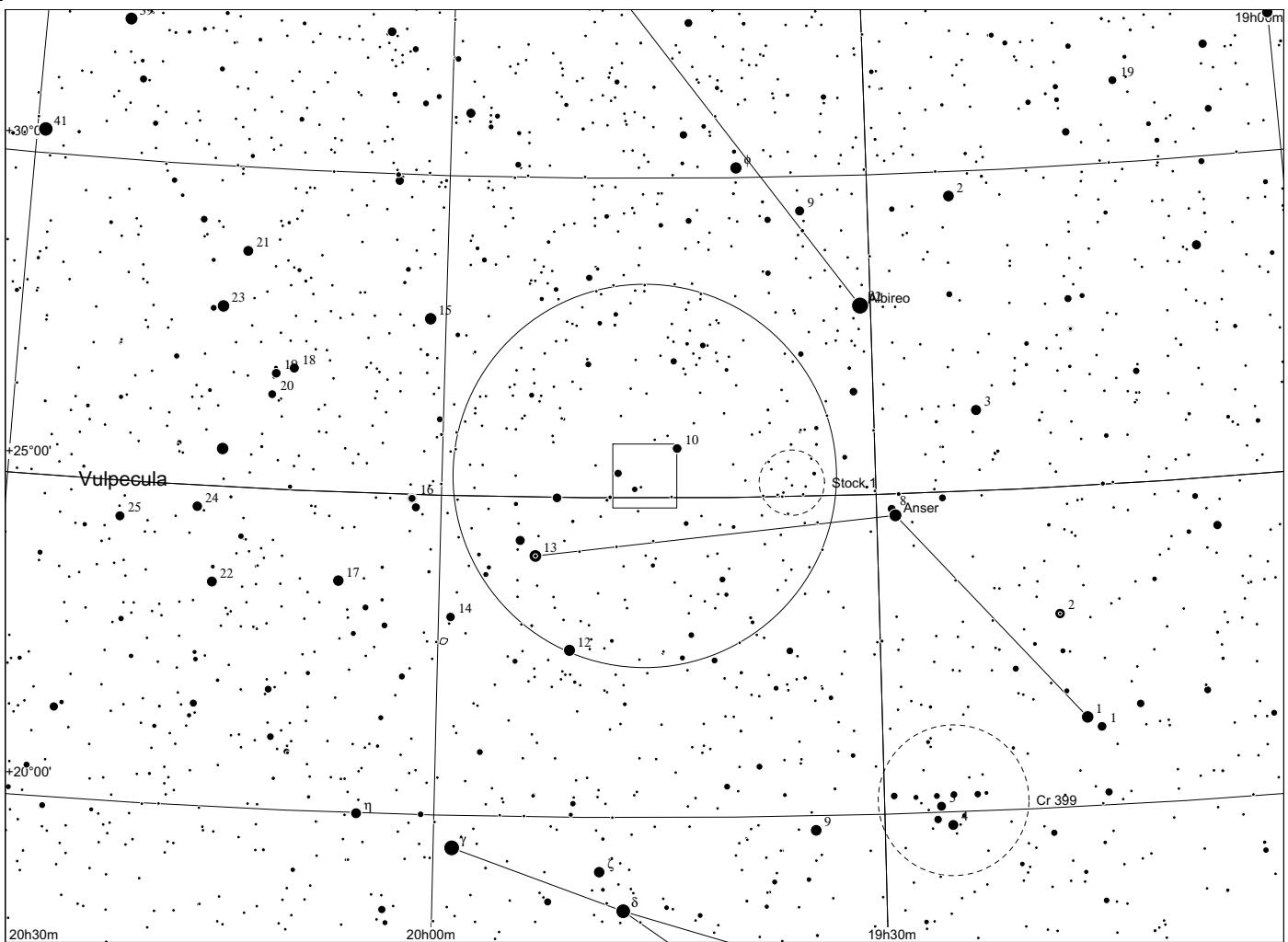
RGB Dean Salman

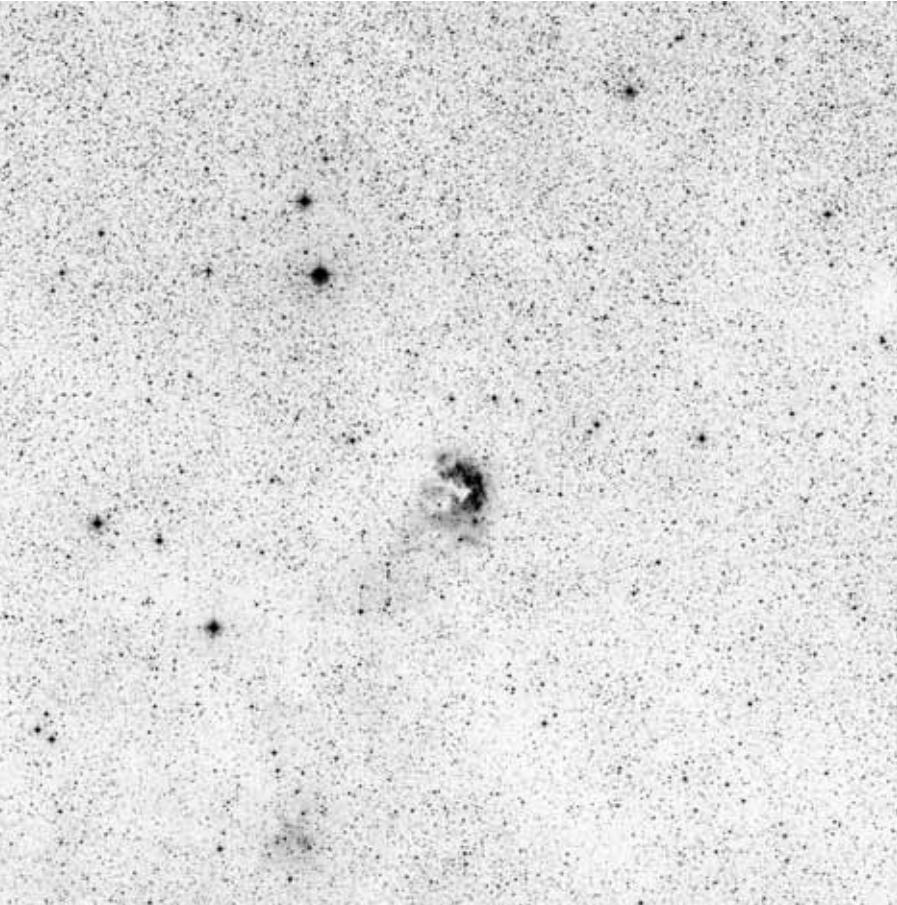
	other name	RA	dec	dia.	'	F	S	B
Sh 2-088		19 45 58.4	+25 20 38	25	3	2	2	

Distance: 2000 pc, Size: 14.5 pc, Source: 1982ApJS...49..183B

This nebula associated with Vul OB1 consists of three regions - star formation began in a diffuse large nebula Sh 2-88A, then spread to the compact HII region Sh 2-88B1, ionised by an O8.5-9.5 V star, and then finally spread to the ultracompact Sh 2-88B2, ionised by a star dimmer than B0.5 V.

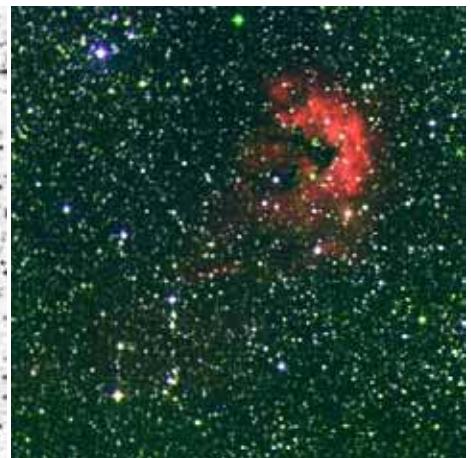
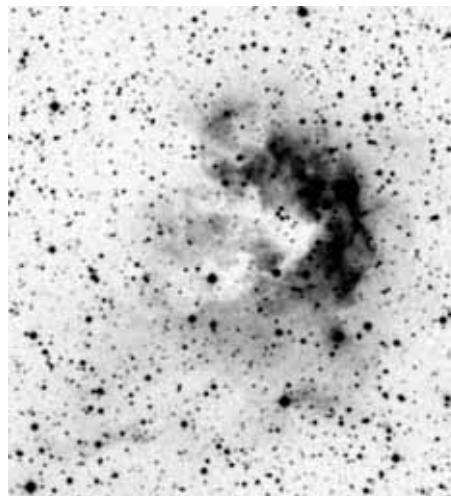
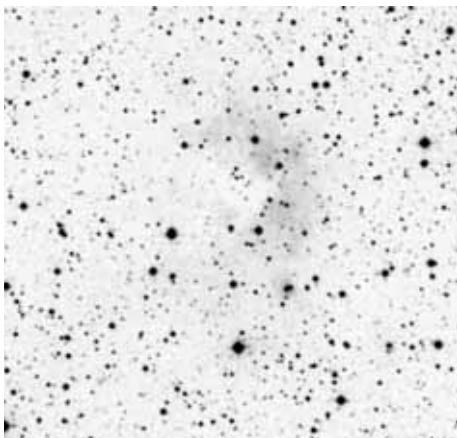
Observing notes:





Sh 2 - 90
in Vulpecula

60x60, red



POSS blue

POSS red

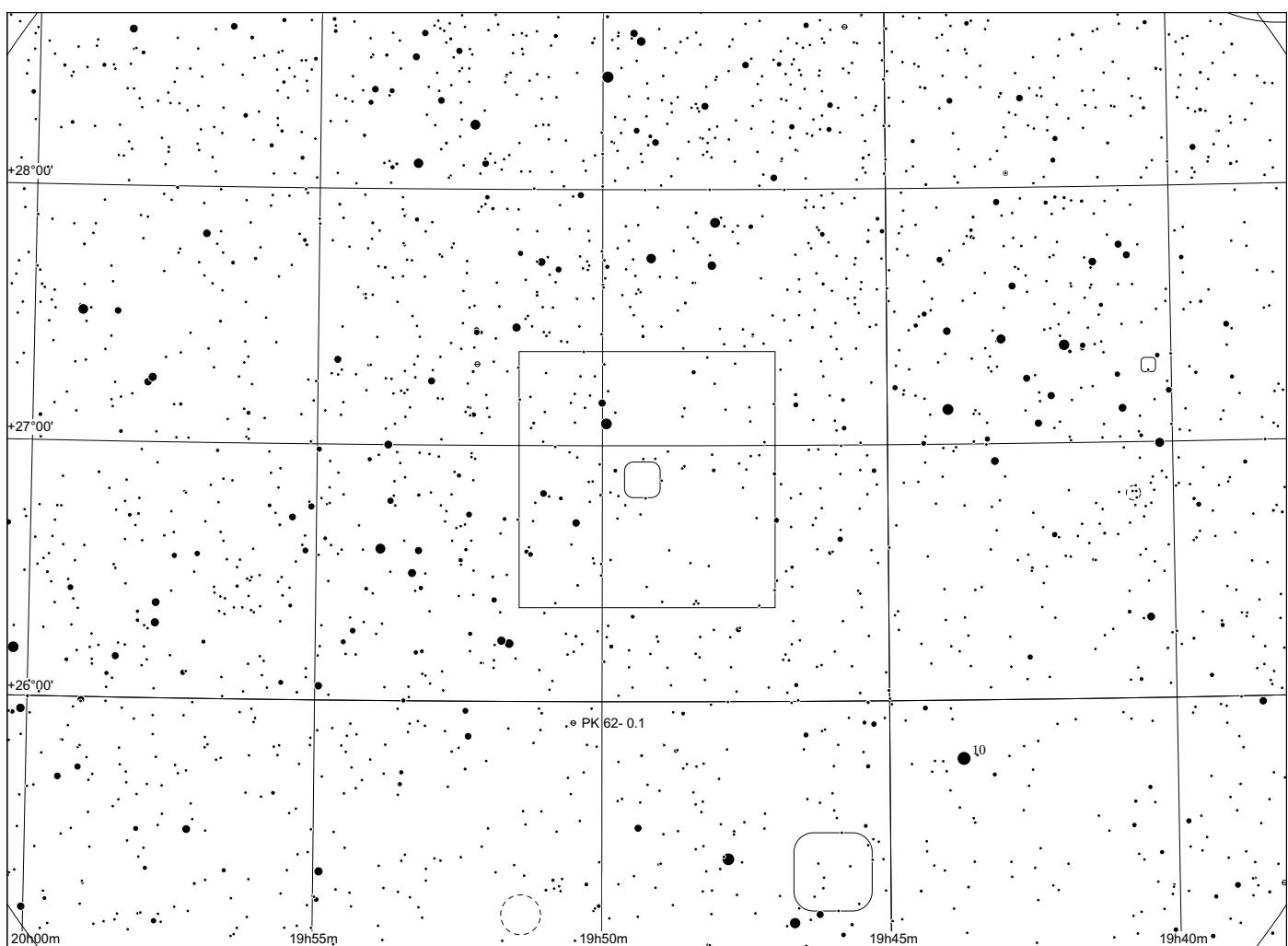
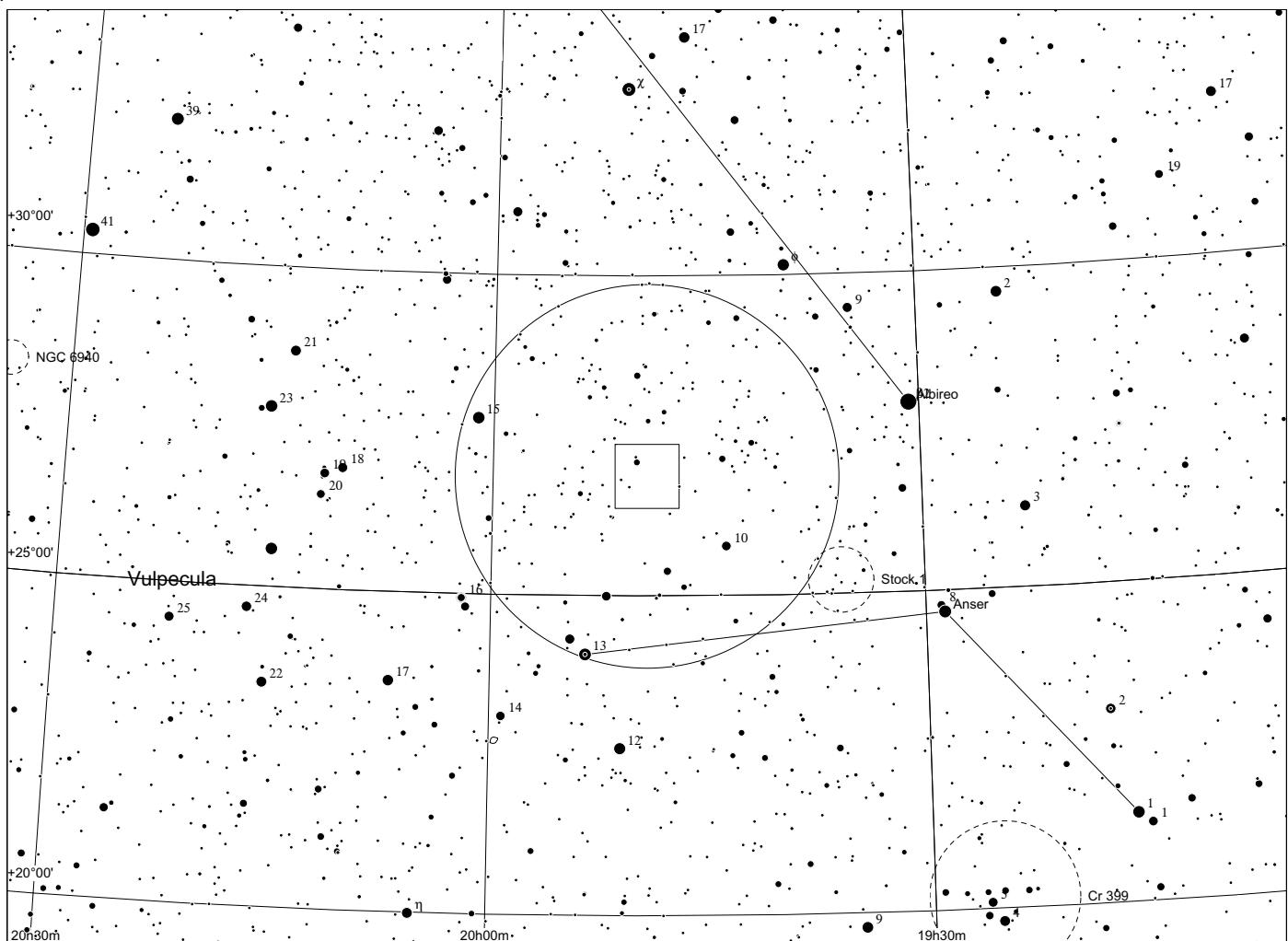
composite

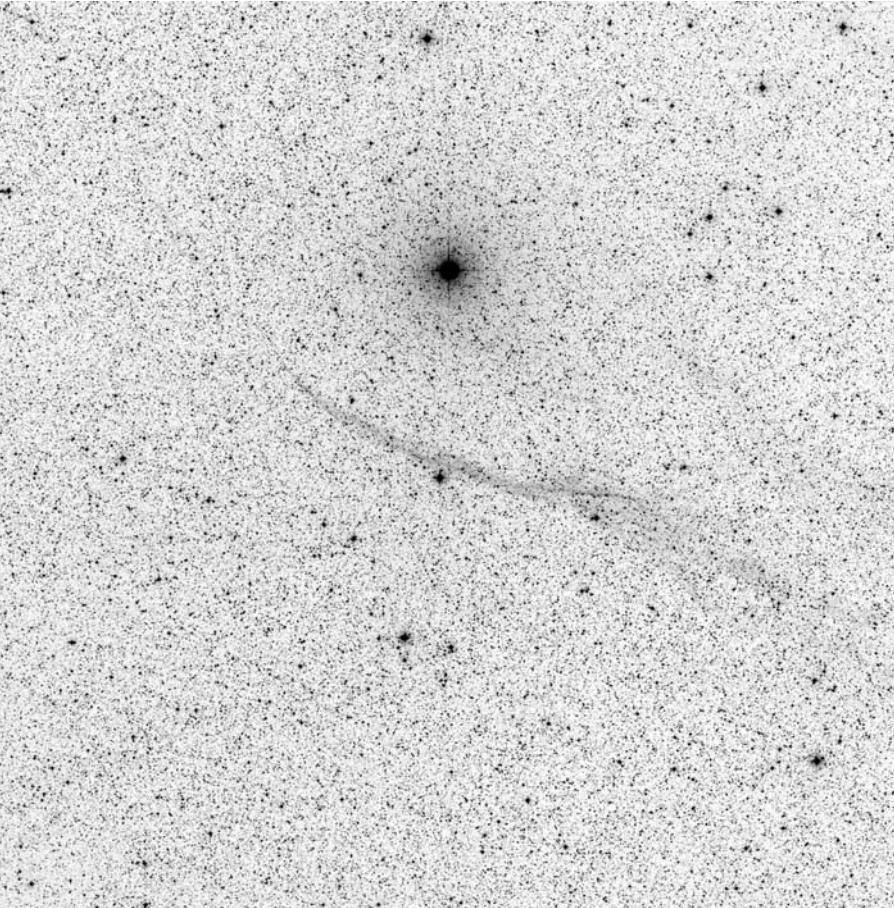
	other name	RA	dec	dia. '	F	S	B
Sh 2-090		19 49 12.7	+26 52 04	6	3	2	2

Distance: 2400 pc, Size: 2.1 pc, Source: 1983A&A...124....1L

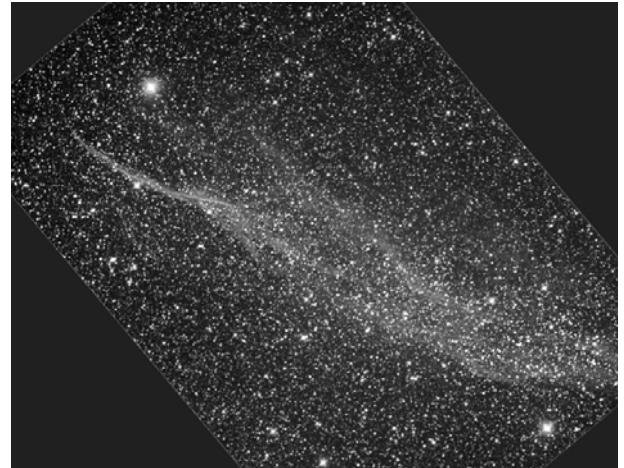
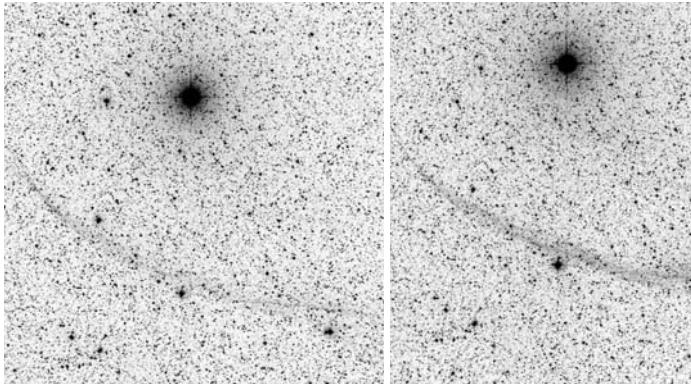
Sh 2-90 is a blister on a 60 thousand solar mass molecular cloud and appears to be affected by gas streaming from the Vulpecula OB1 association. It contains a cometary elephant trunk structure on its eastern edge which appears to have originated from a past disturbance from the southwest.

Observing notes:





**Sh 2 - 91
in Cygnus**



POSS blue

POSS red

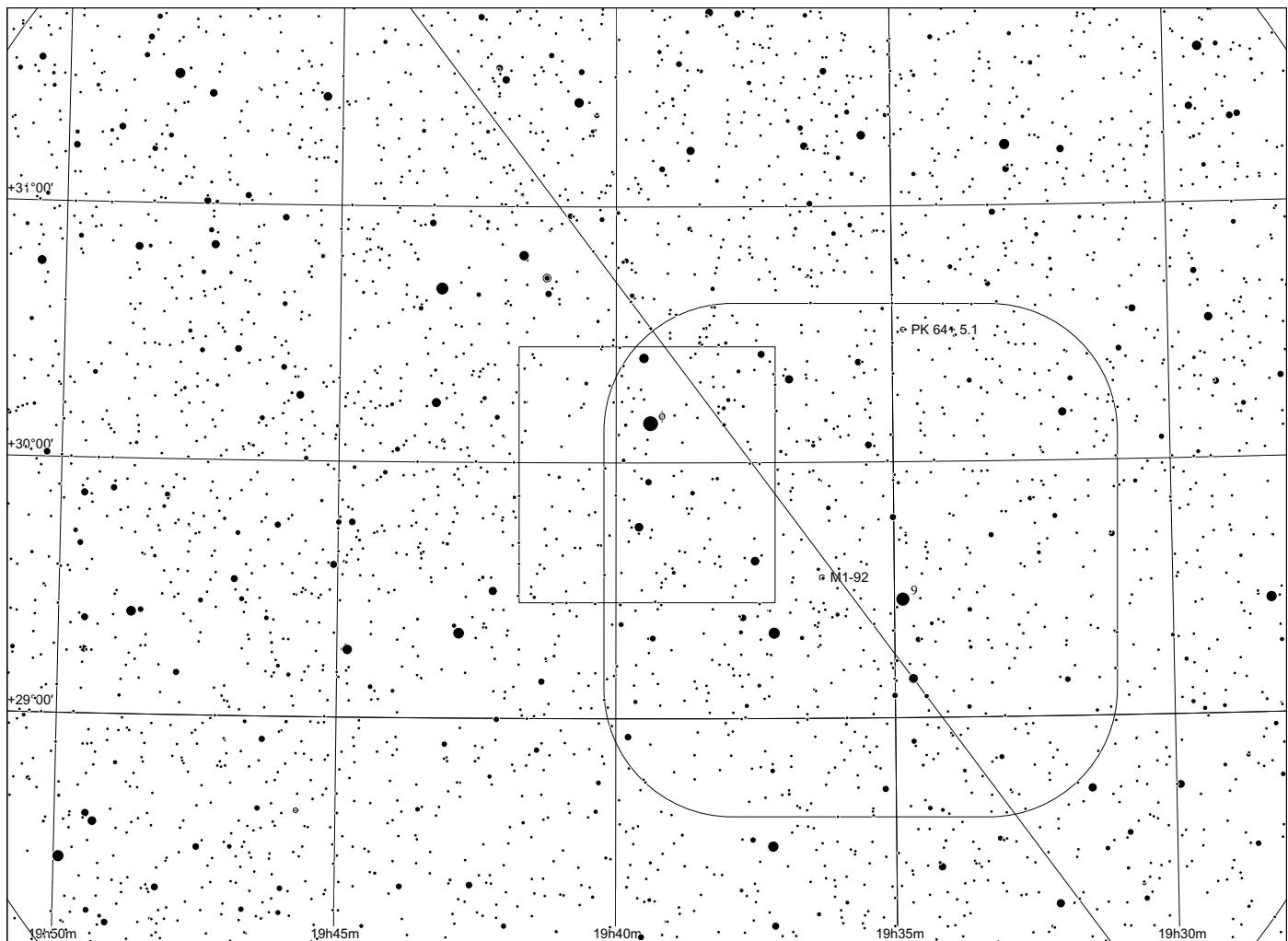
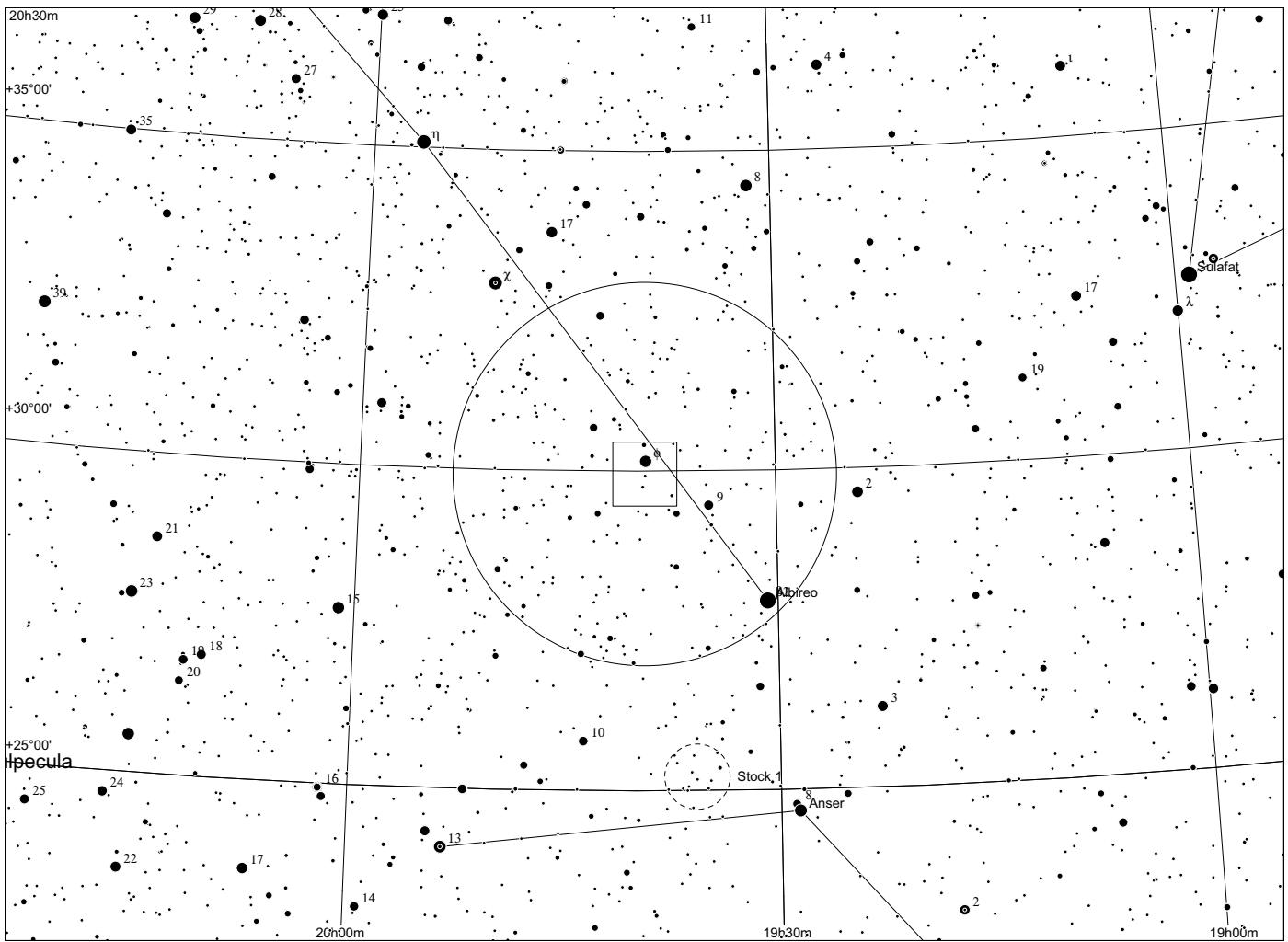
H alpha Dean Salman

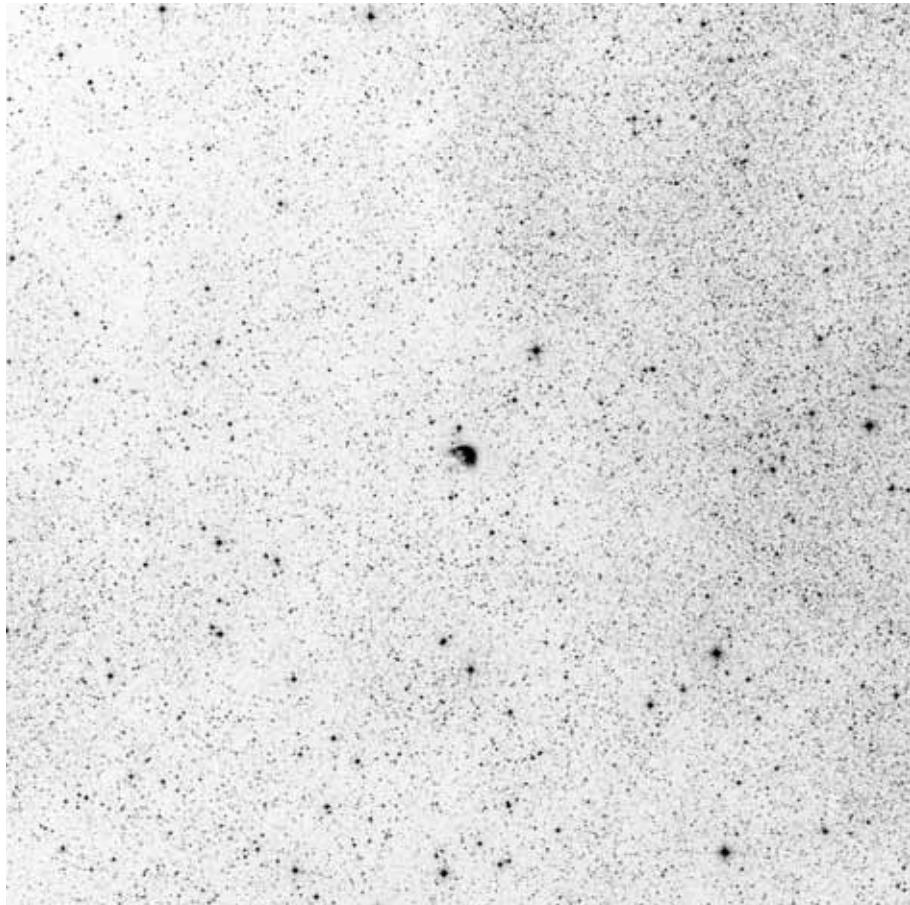
	other name	RA	dec	dia. '	F	S	B
Sh 2-091	part of SNR	19 35 34.0	+29 36 16	120	3	3	2

Distance: 900 pc, Size: 31.4 pc, Source: 1989A&AS...77..439F

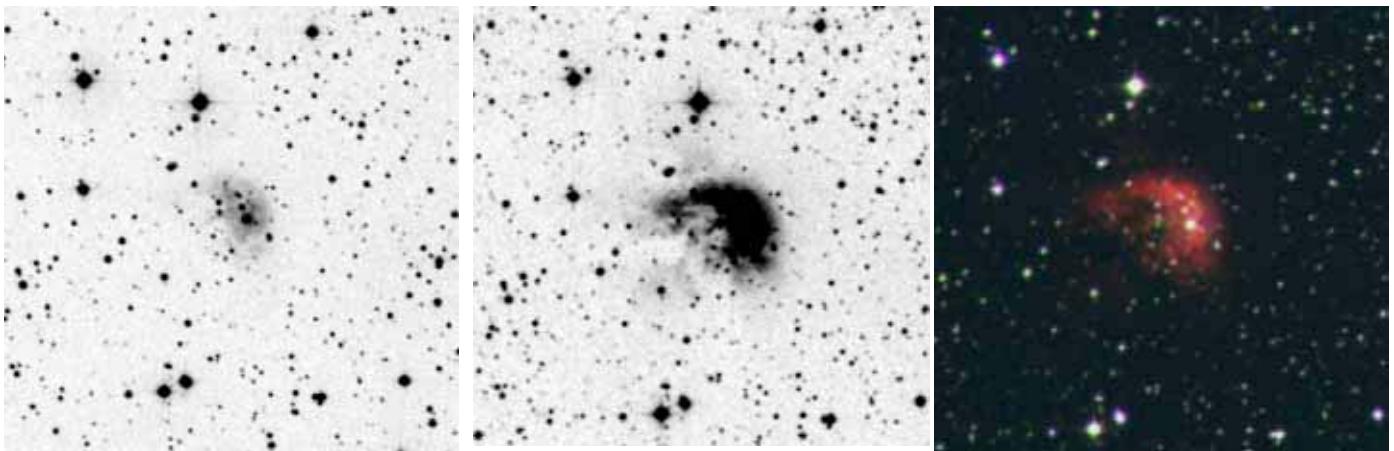
This is a filament of the supernova remnant SNR 065.2+05.7, which has a diameter of about 70 parsecs and an age of about 20 thousand years..

Observing notes:





Sh 2 - 93
in Vulpecula



POSS blue

POSS red

composite

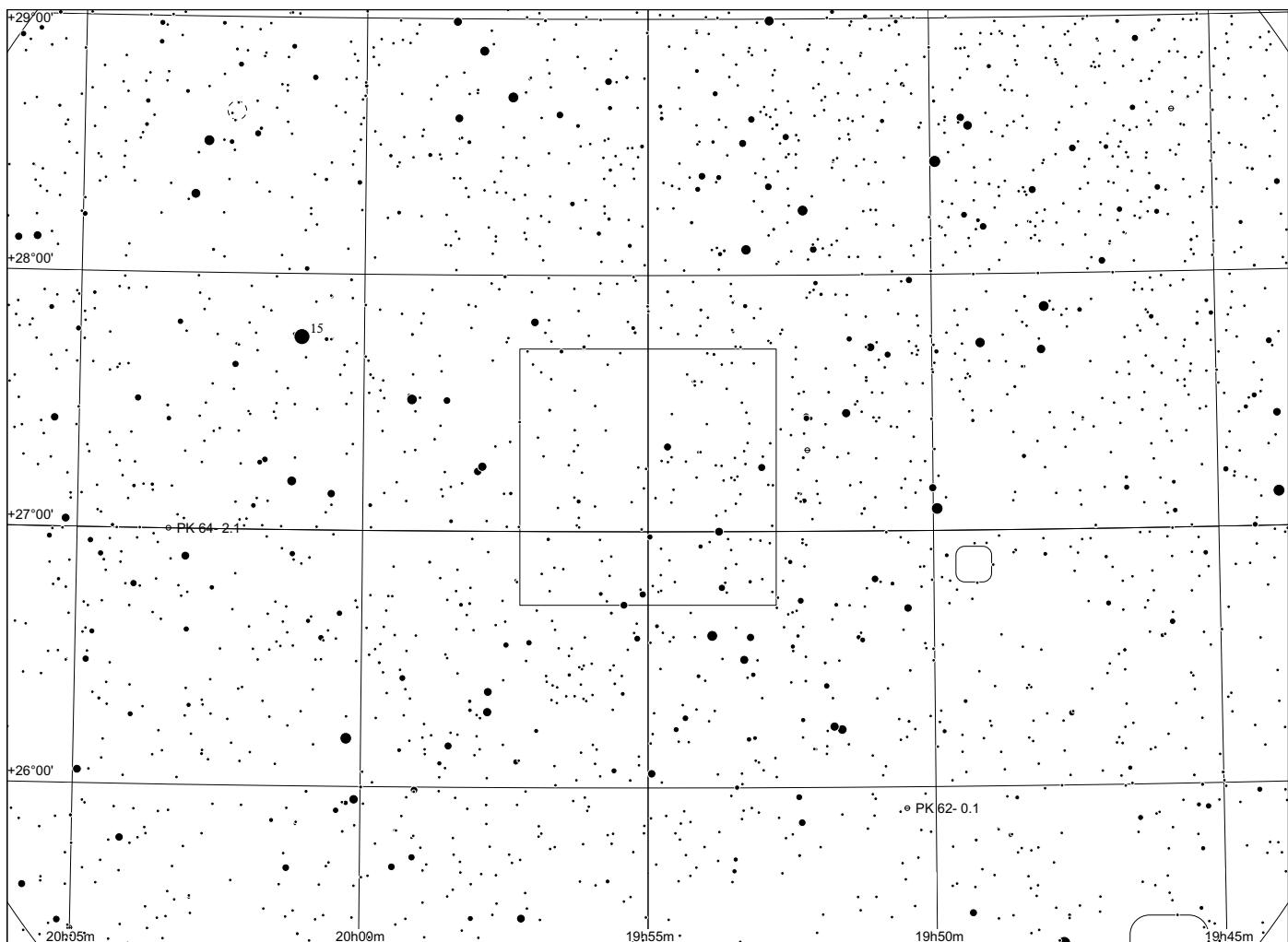
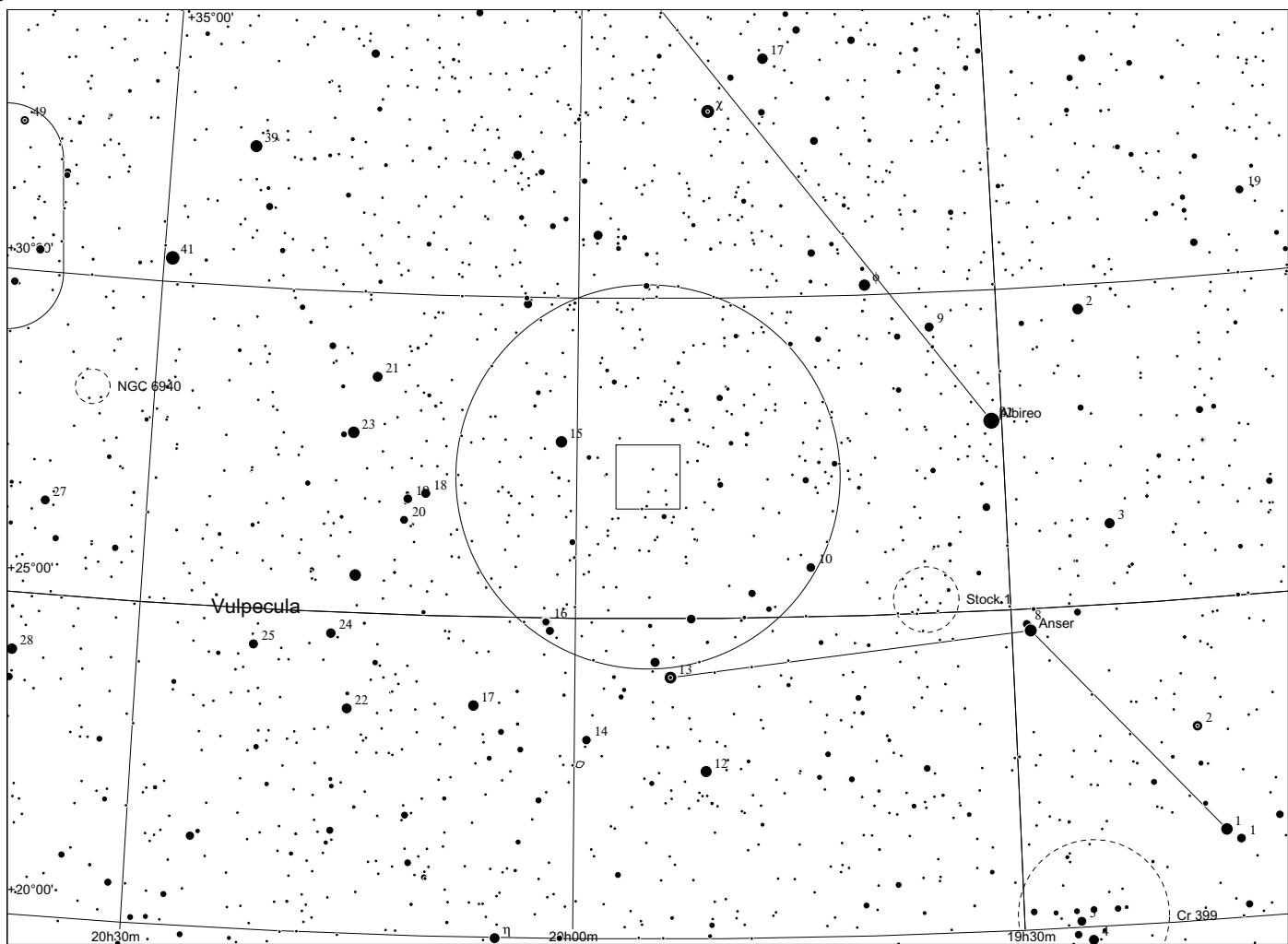
	other name	RA	dec	dia. '	F	S	B
Sh 2-093		19 55 00.6	+27 12 48	1	3	2	3

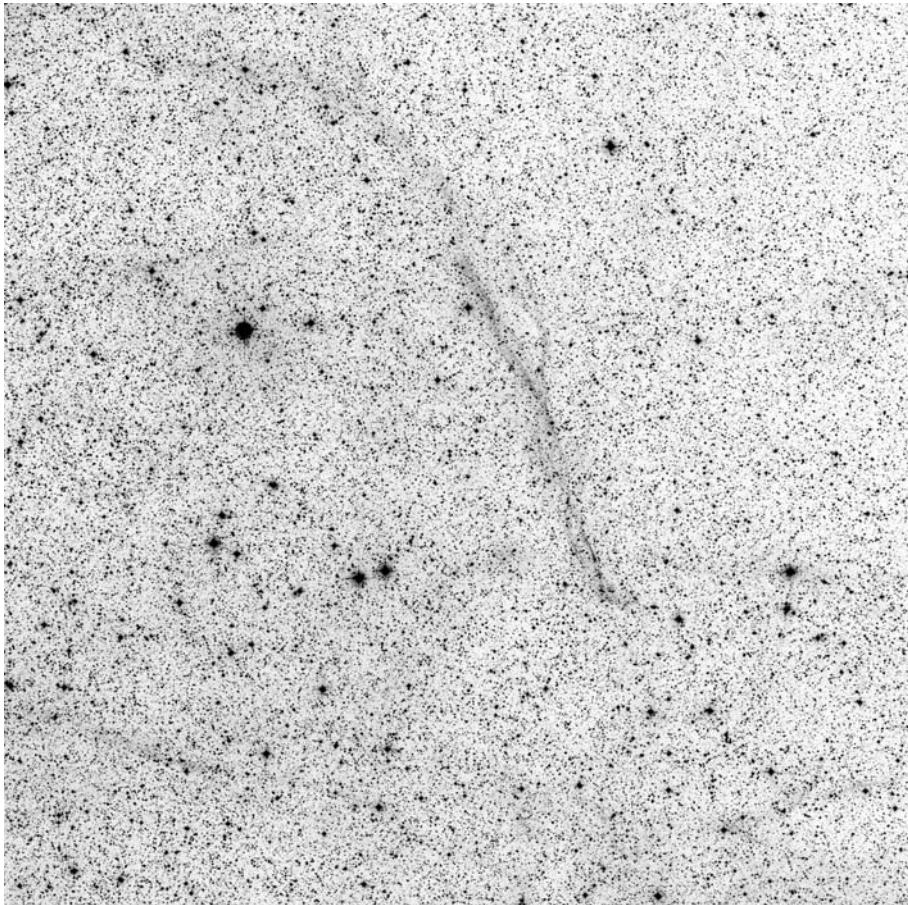
Distance: 3713 pc, Size: 4.4 pc, Source: 2003A&A...397..213P

Ionised by the O9V star [F89b] S93 1 and appears to contain the infrared star cluster [BDS2003] 16.

There is a second distance estimate of 2600 pc - probably best to move this on the map.

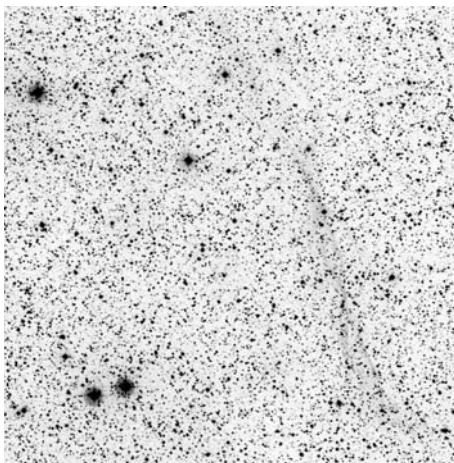
Observing notes:



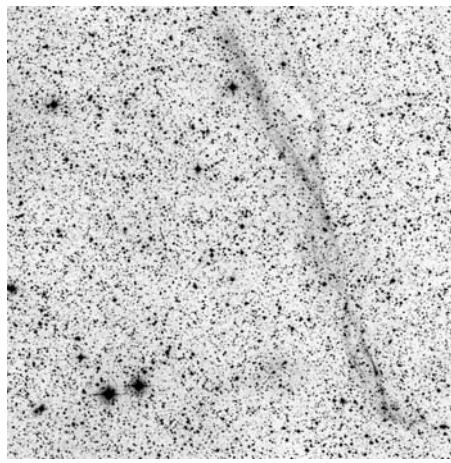


Sh 2 - 94
in Cygnus

60x60, red, enhanced



POSS blue



POSS red



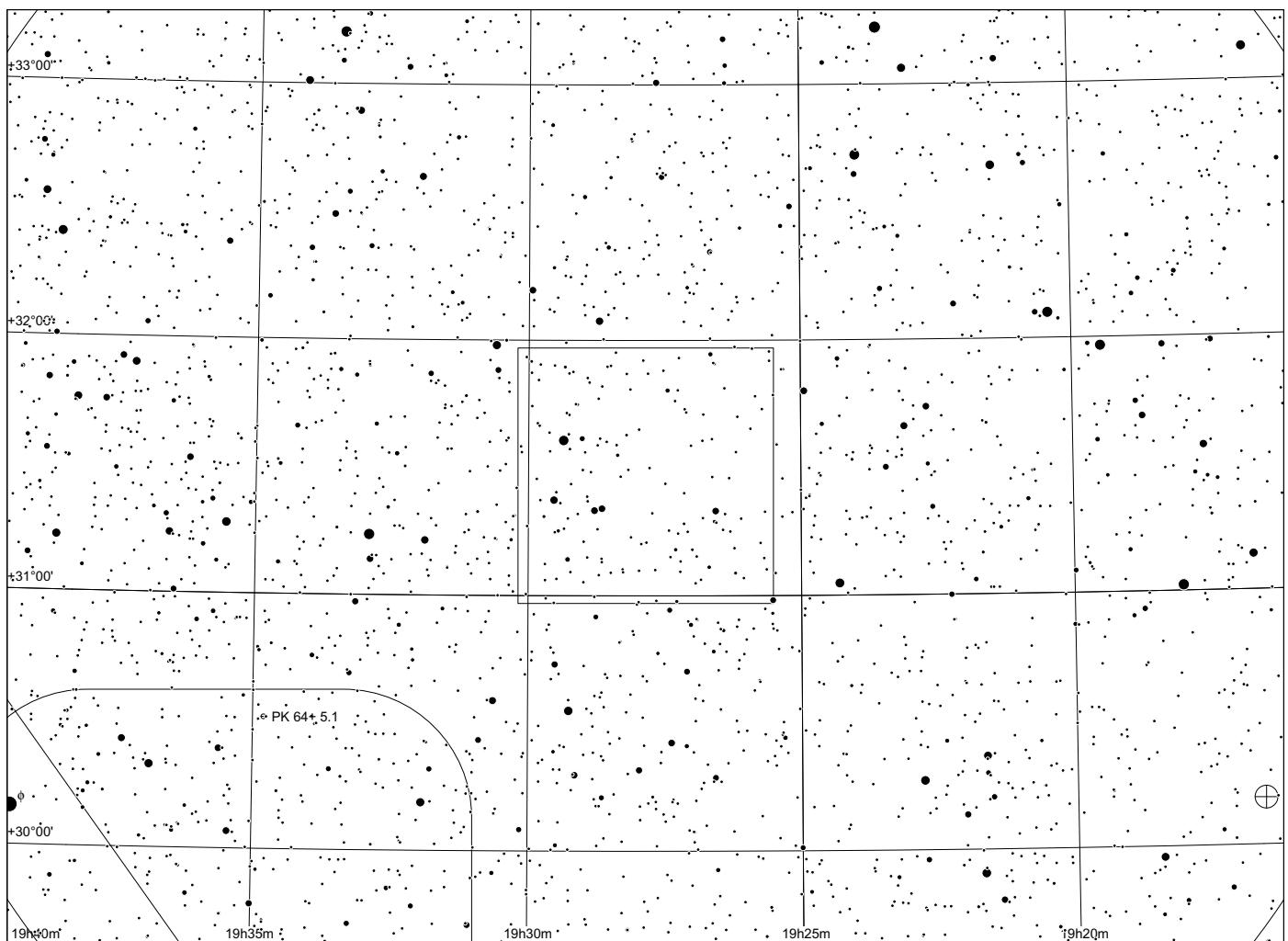
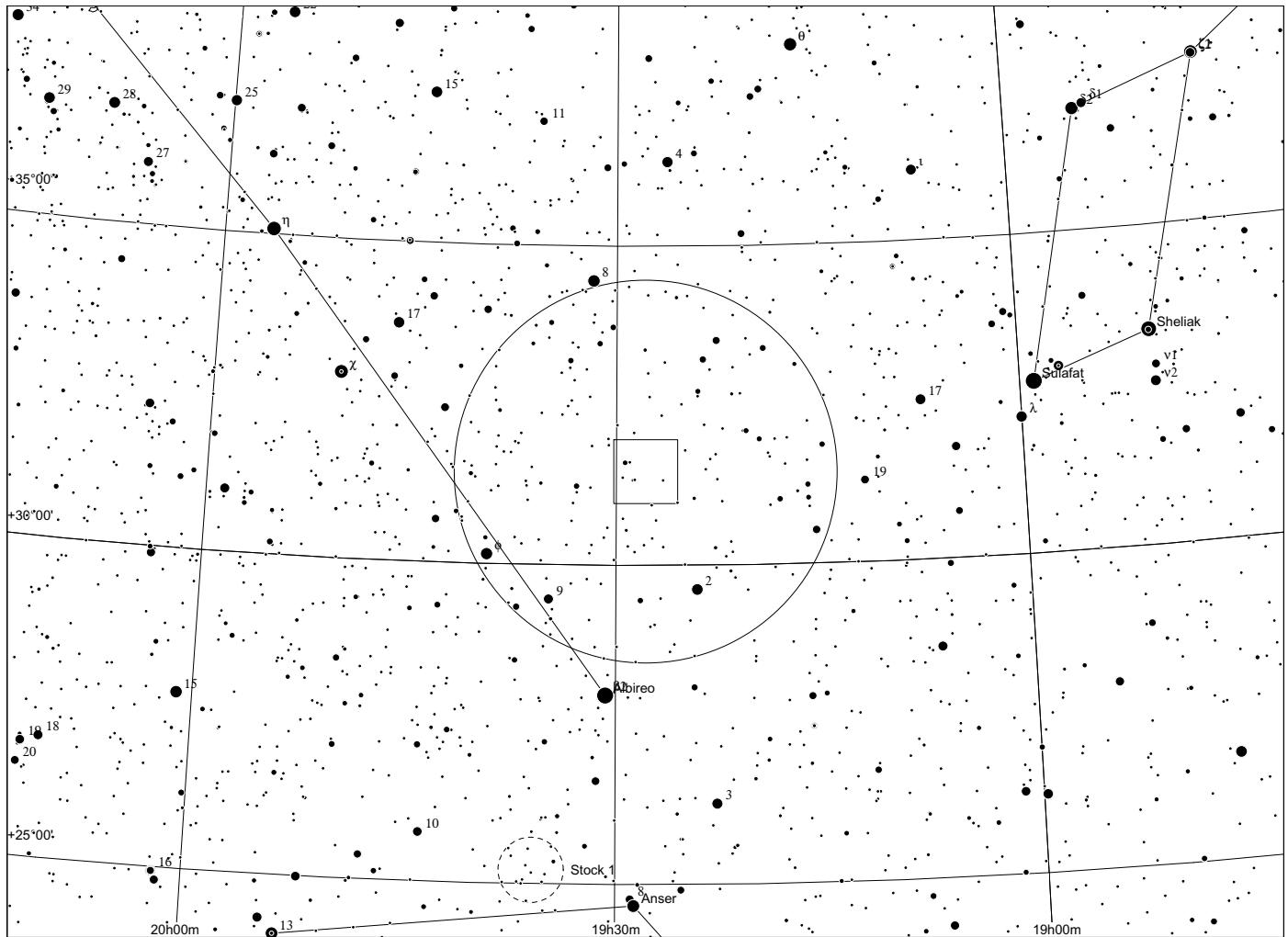
narrowband Dean Salman

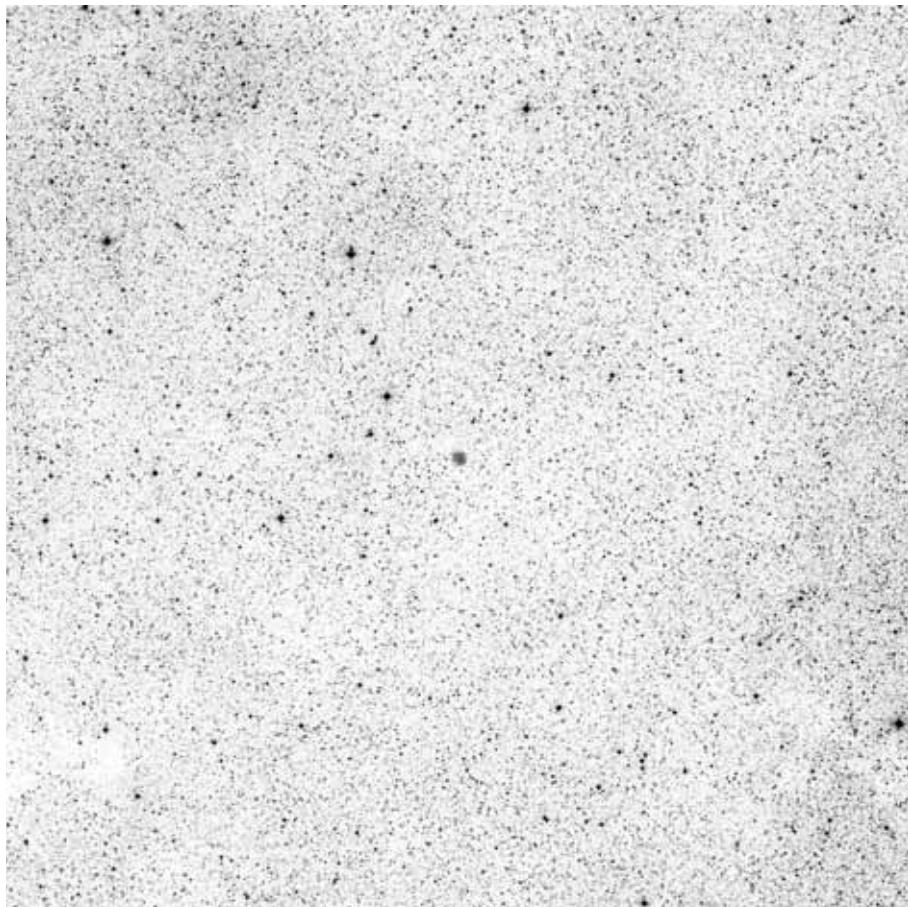
	other name	RA	dec	dia. '	F	S	B
Sh 2-094	part of SNR	19 27 50.8	+31 28 14	25	3	3	1

Distance: 3900 pc, Size: 28.4 pc, Source: 2003A&A...397..133R

This is a filament of the supernova remnant SNR 65.2+5.7 which is actually at 900 pc.

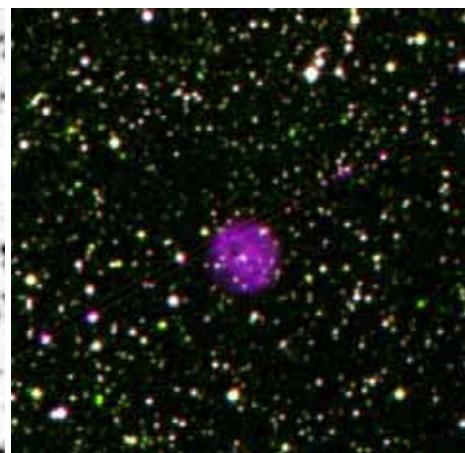
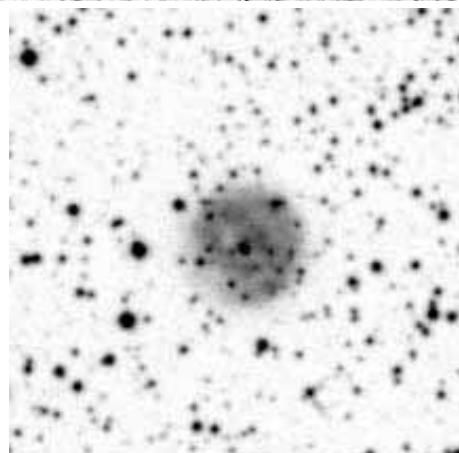
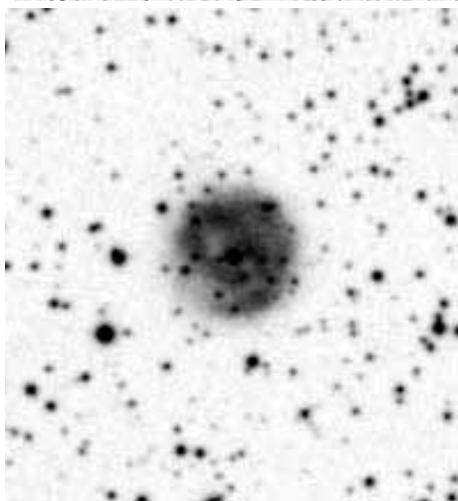
Observing notes:





**Sh 2 - 95
in Vulpecula**

60x60, red



POSS blue

POSS red

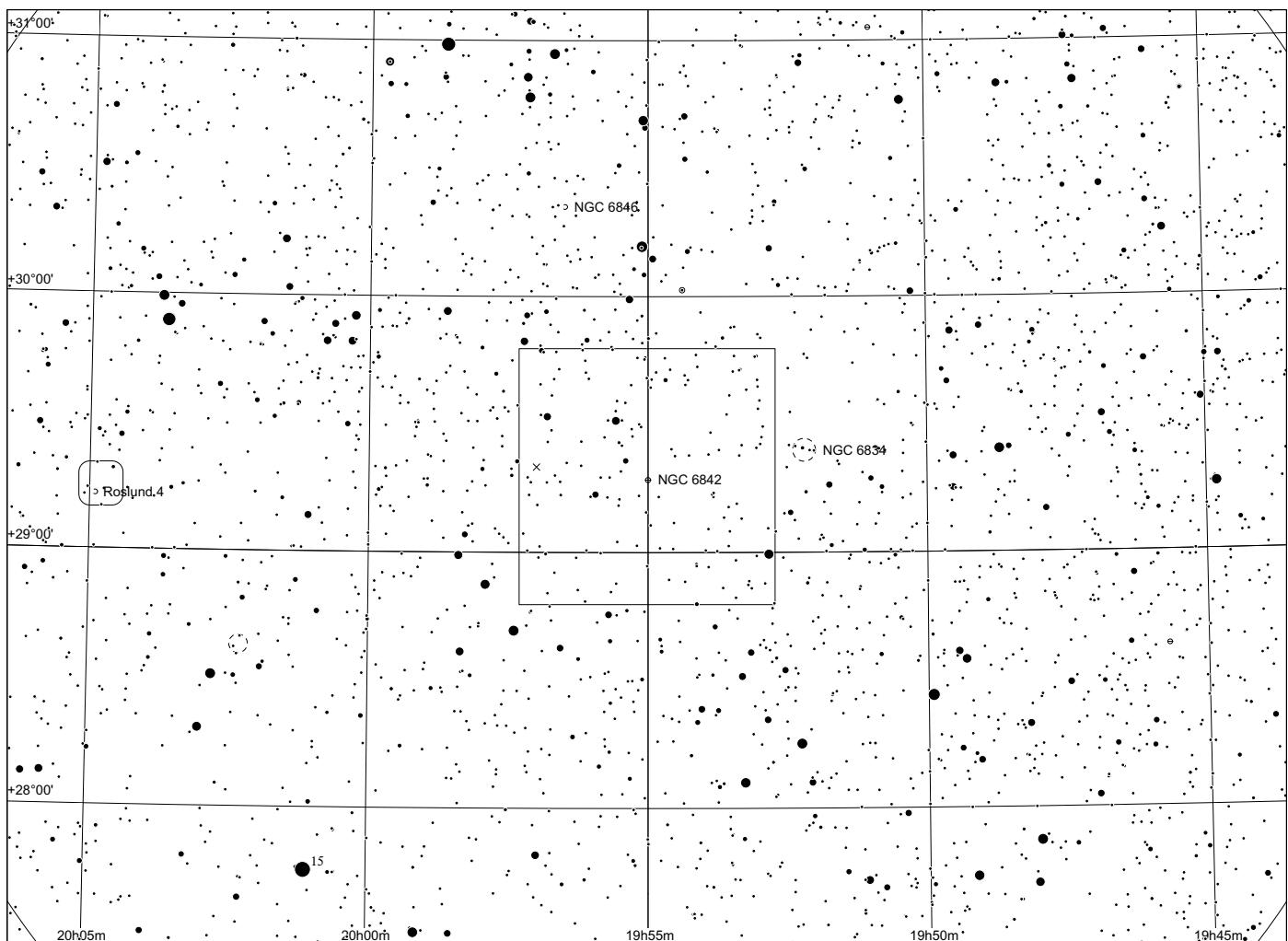
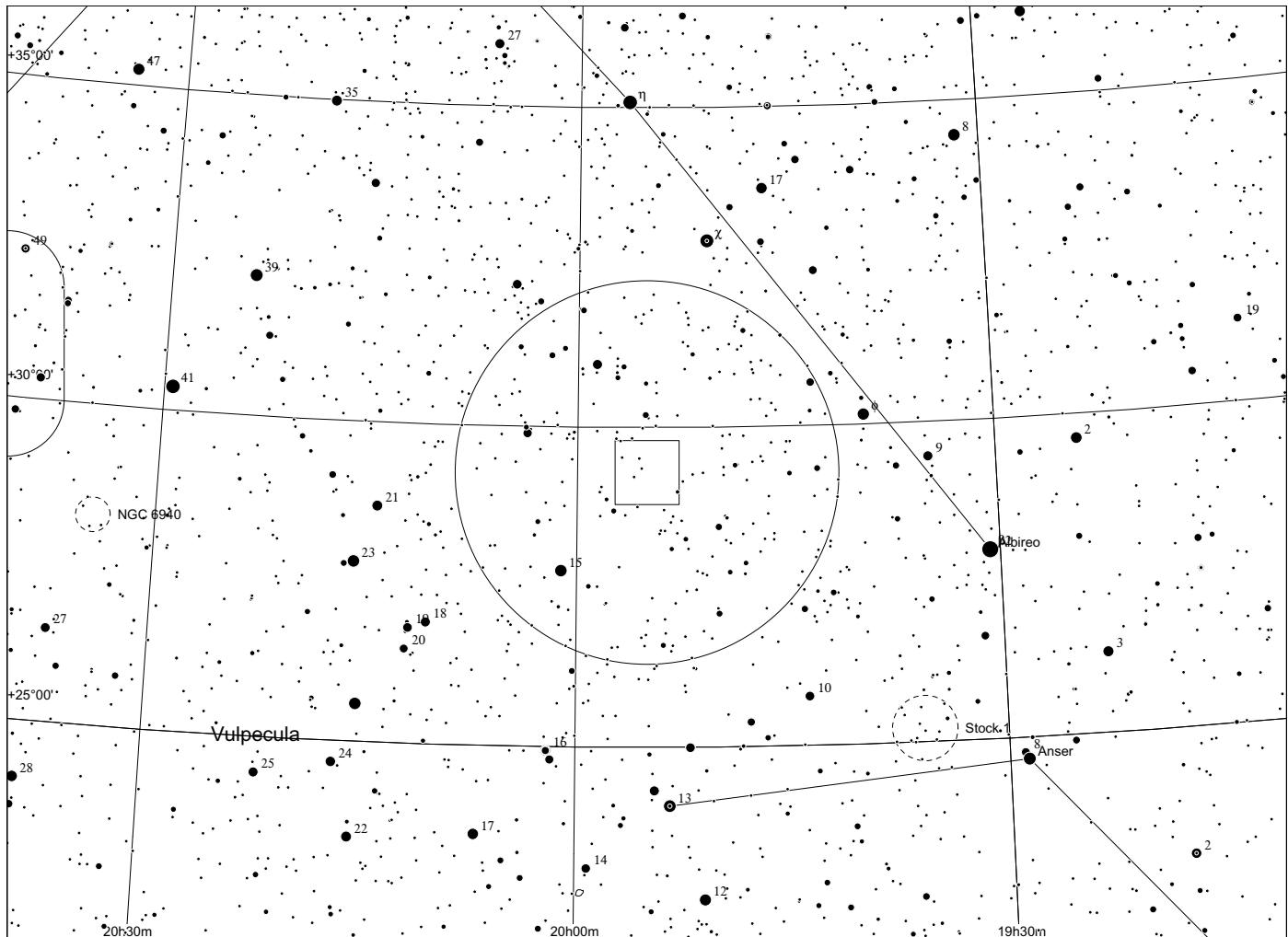
composite

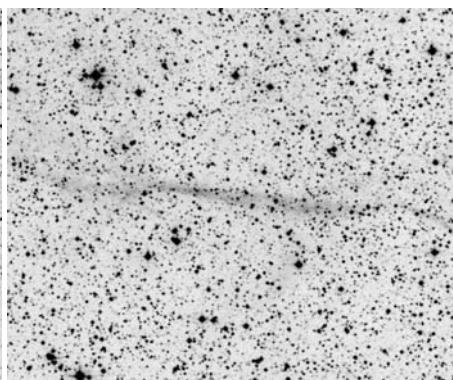
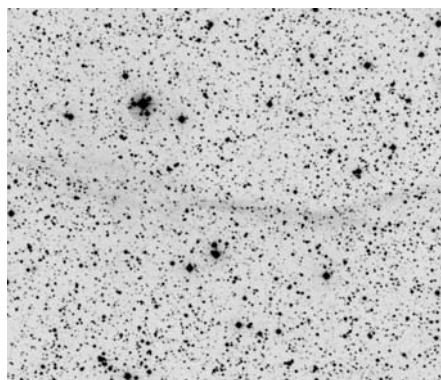
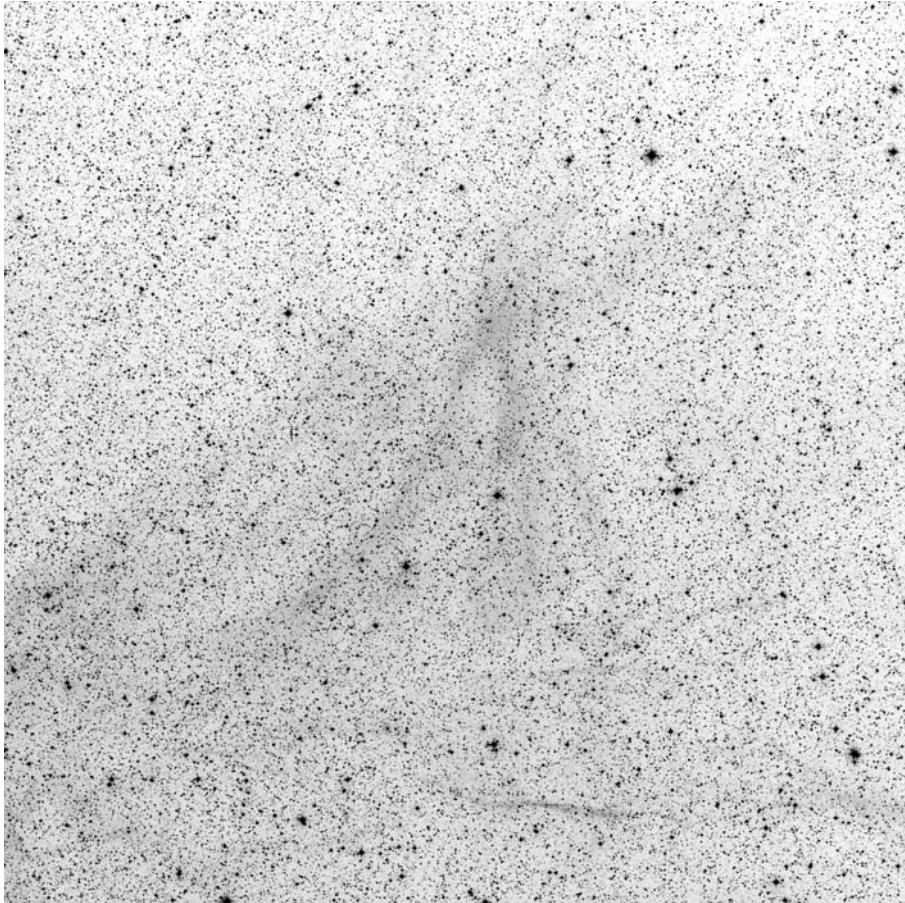
	other name	RA	dec	dia. '	F	S	B
Sh 2-095	NGC6842, PN	19 55 00.9	+29 17 49	1	1	2	2

Distance: Unknown

This is the planetary nebula NGC 6842. Distance: 1250 pc.

Observing notes:





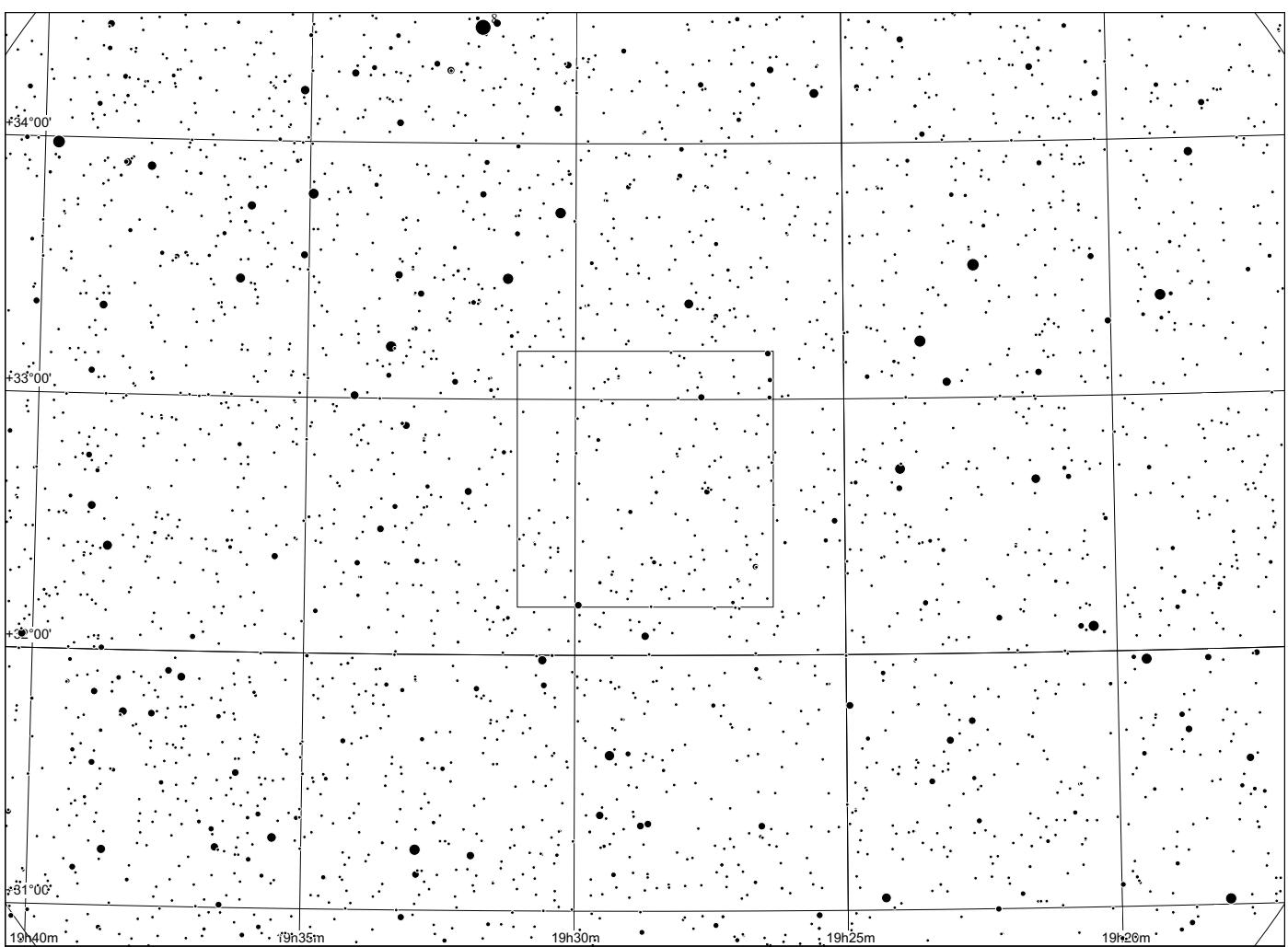
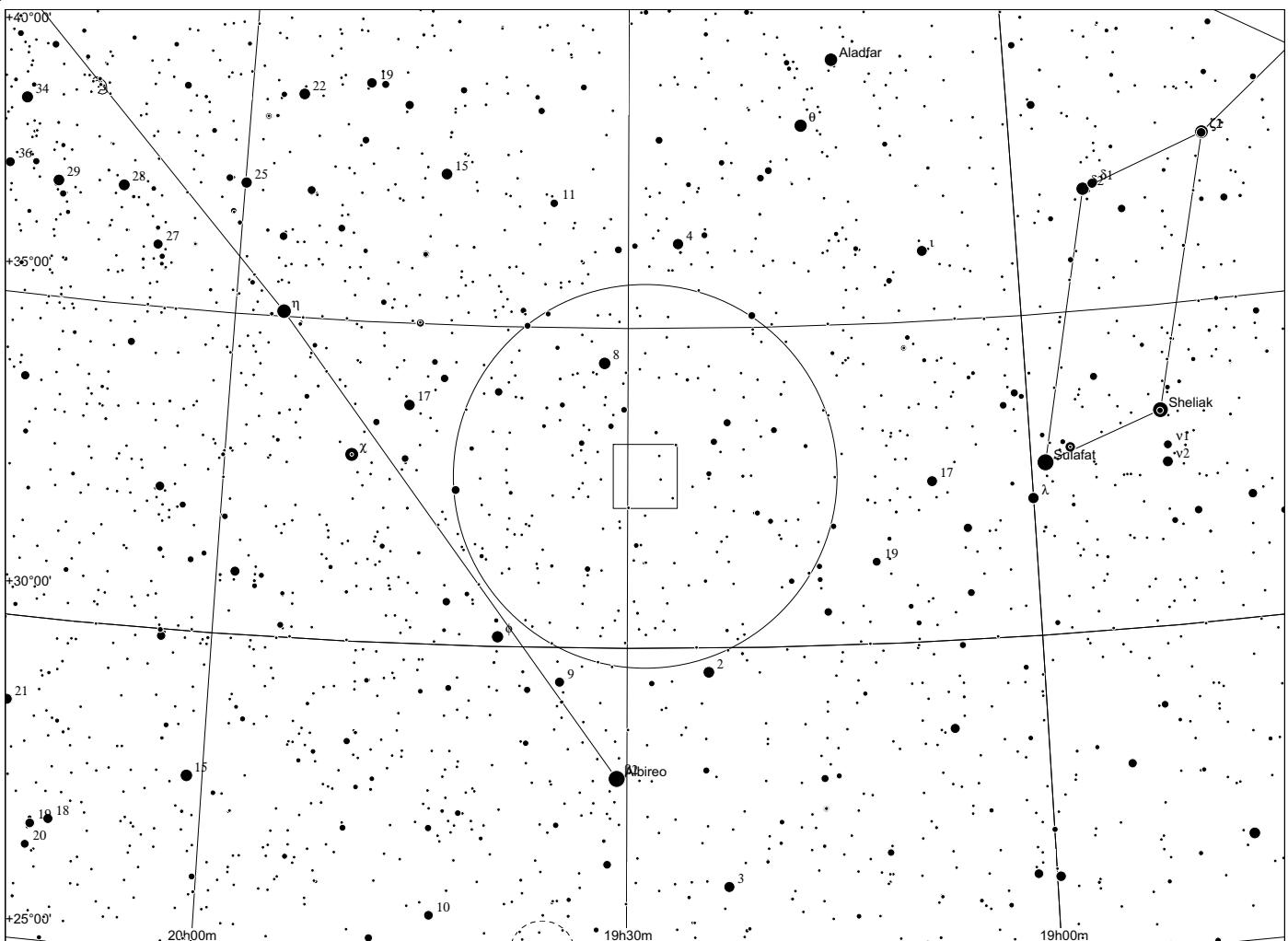
	other name	RA	dec	dia. '	F	S	B
Sh 2-096	part of SNR	19 28 42.0	+32 41 21	25	3	2	1

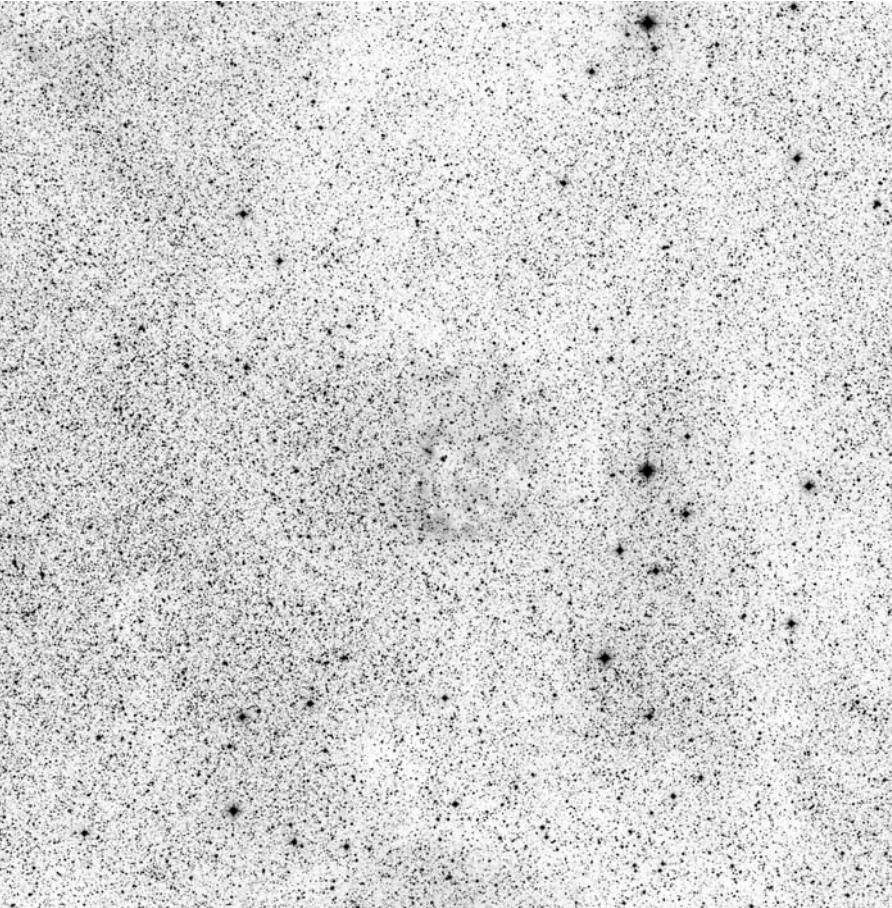
Distance: 900 pc, Size: 6.5 pc, Source: 1989A&AS...77..439F

Sh 2-96 is part of the same supernova remnant as Sh 2-91 and Sh 2-94: SNR 065.2+05.7.

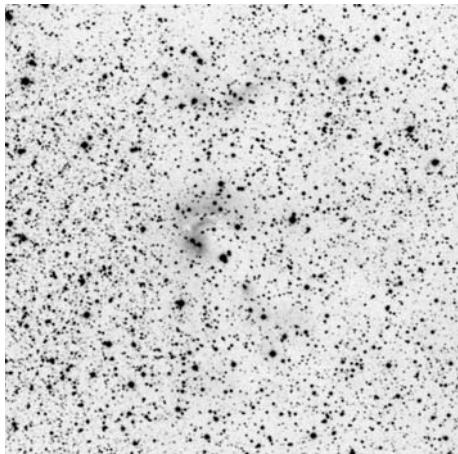
Observing notes:

Sh 2 - 96
in Cygnus

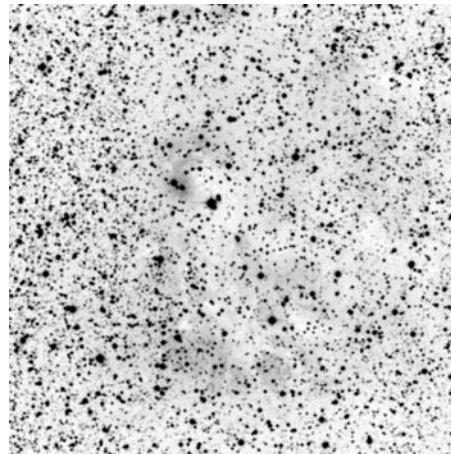




Sh 2 - 97
in Cygnus



POSS blue



POSS red



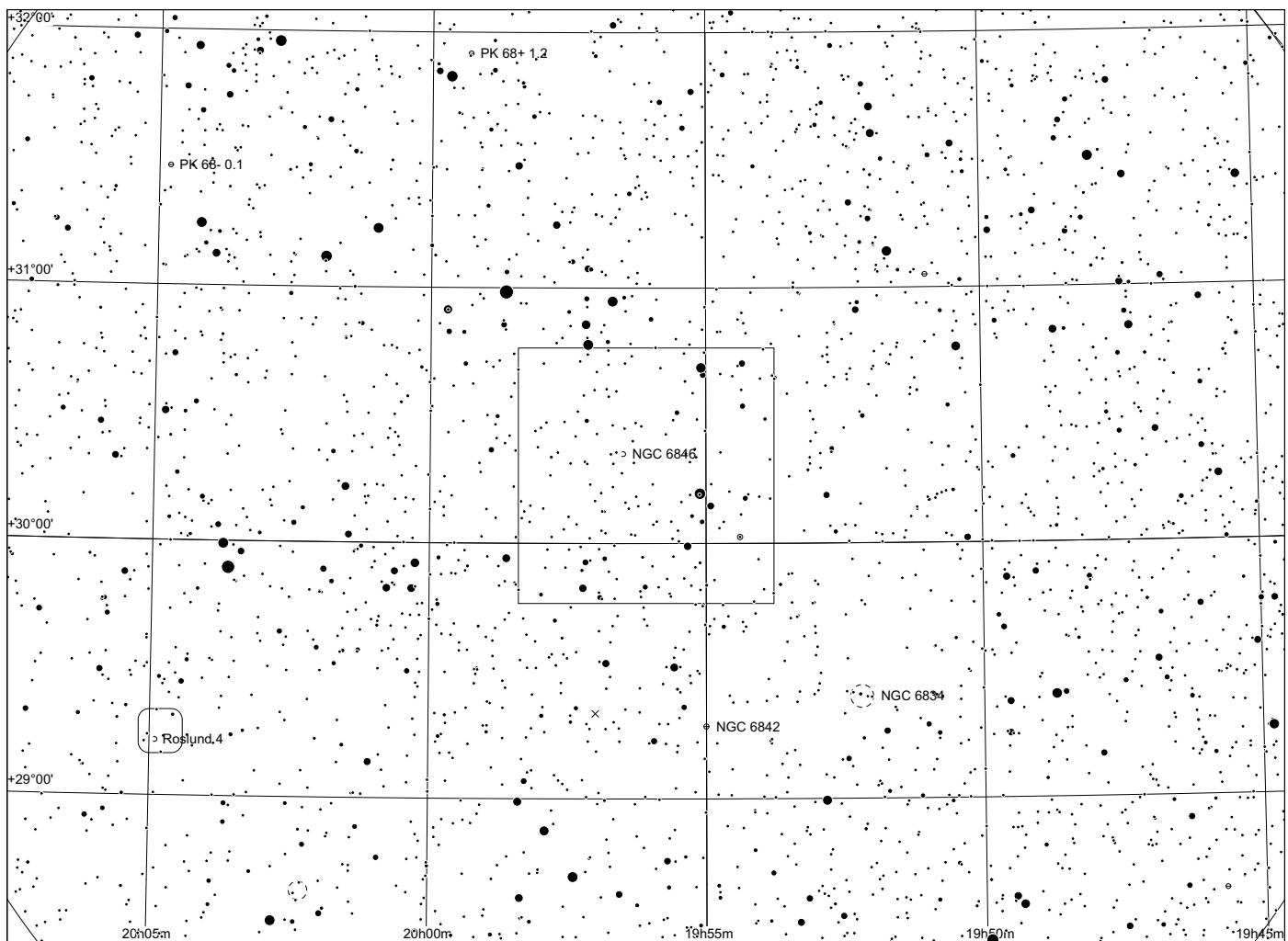
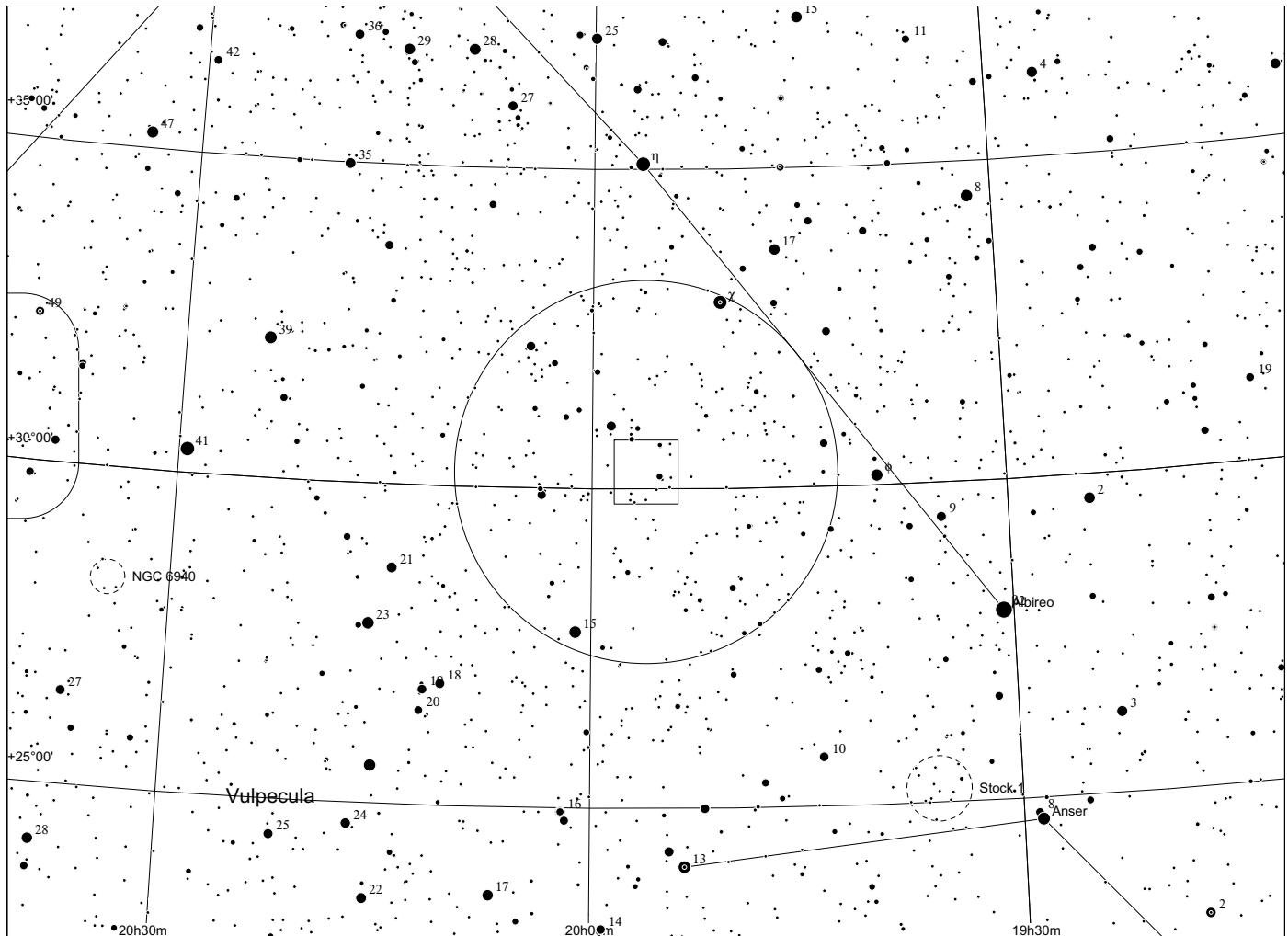
RGB Dean Salman

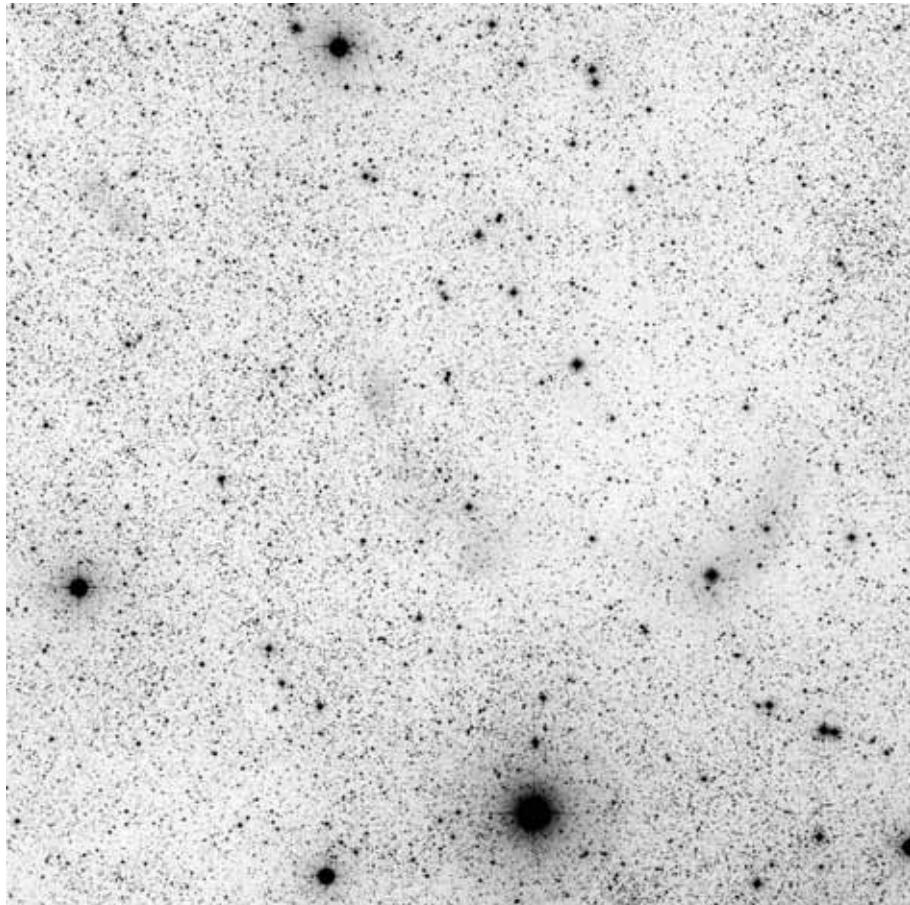
	other name	RA	dec	dia. '	F	S	B
Sh 2-097		19 56 04.6	+30 15 57	10	1	2	1

Distance: 3900 pc, Size: 11.3 pc, Source: 2003A&A...397..133R

Sh 2-97 is ionised by at least four stars - two B1V, one B0.5V and one with a spectral type between O9V and B0V.

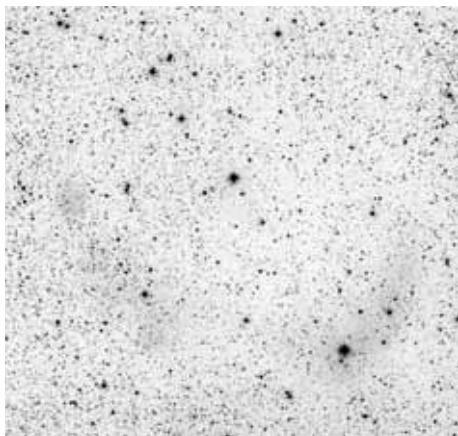
Observing notes:



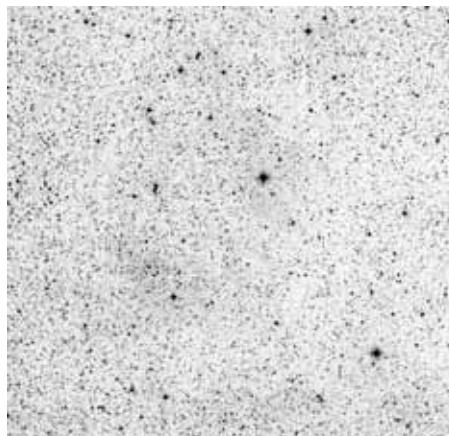


Sh 2 - 98
in Cygnus

60x60, blue enhanced



POSS blue



POSS red



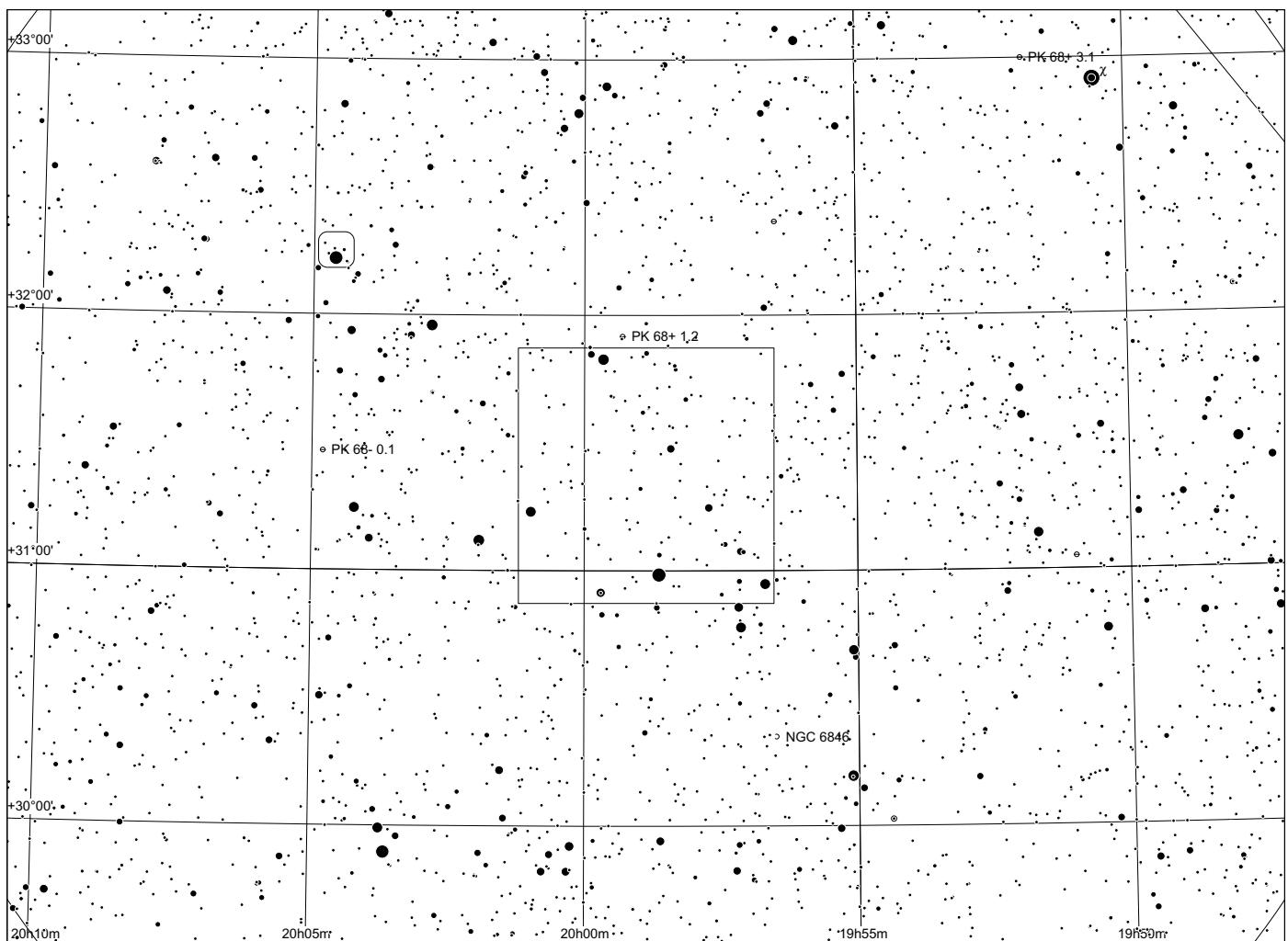
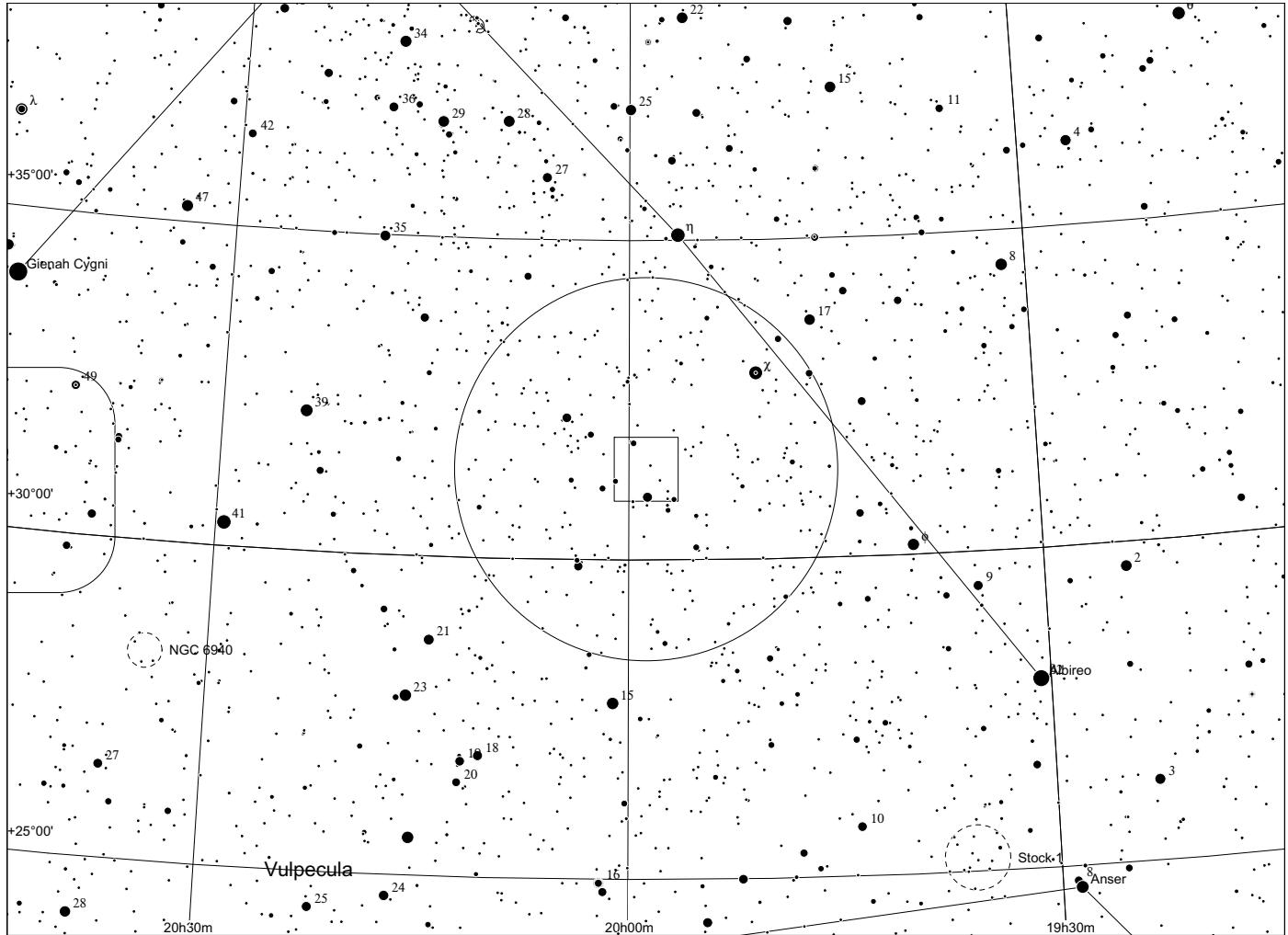
composite

	other name	RA	dec	dia. '	F	S	B
Sh 2-098		19 58 44.3	+31 25 18	15	1	1	1

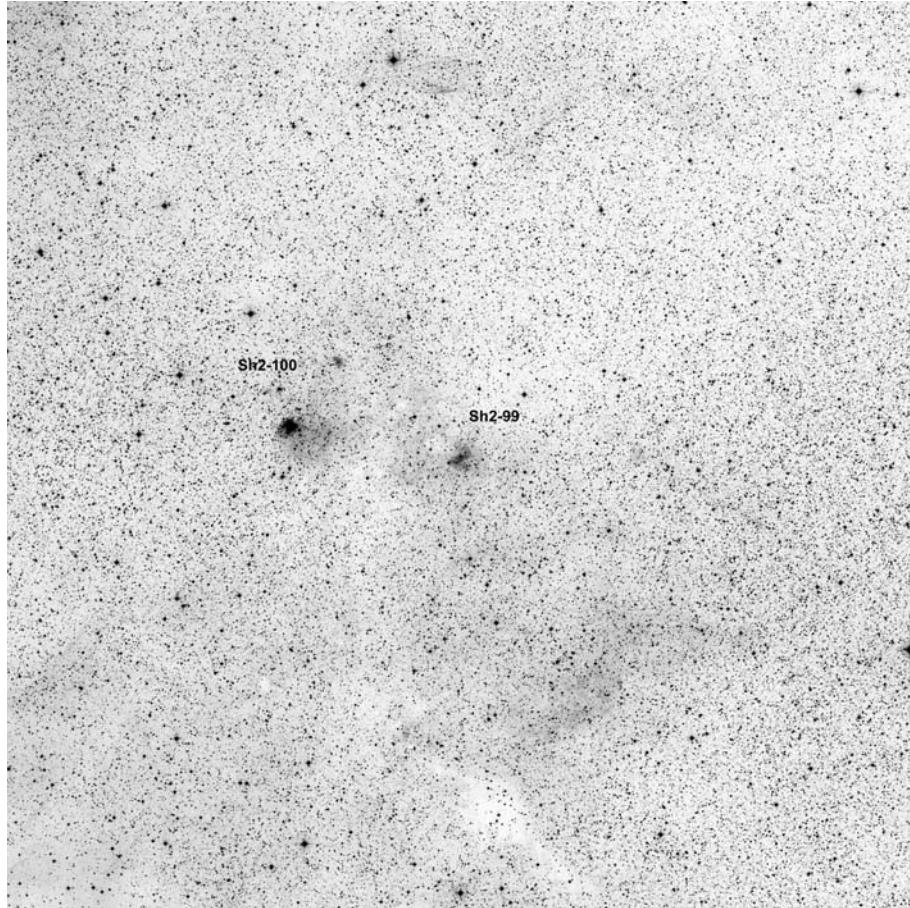
Distance: 3600 pc, Size: 15.7 pc, Source: 2003A&A...397..133R

This is a ring nebula associated with a 3000 solar mass molecular cloud and the Wolf-Rayet star WR 130.

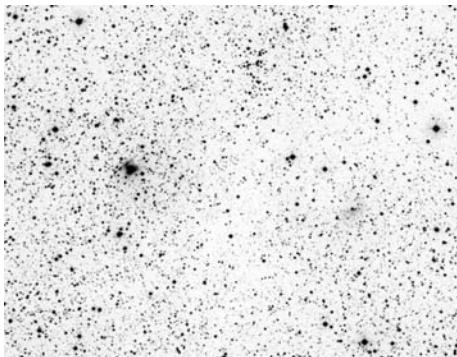
Observing notes:



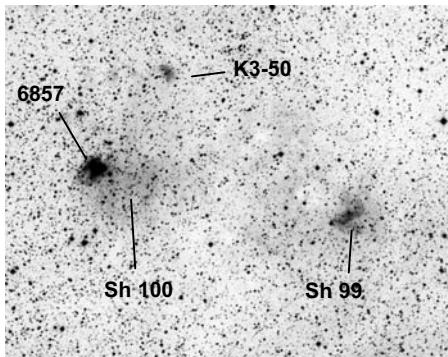
**Sh 2 - 99/100
in Cygnus**



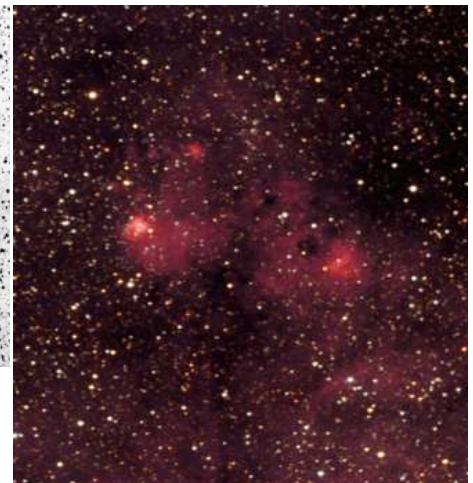
60x60, red



POSS blue



POSS red



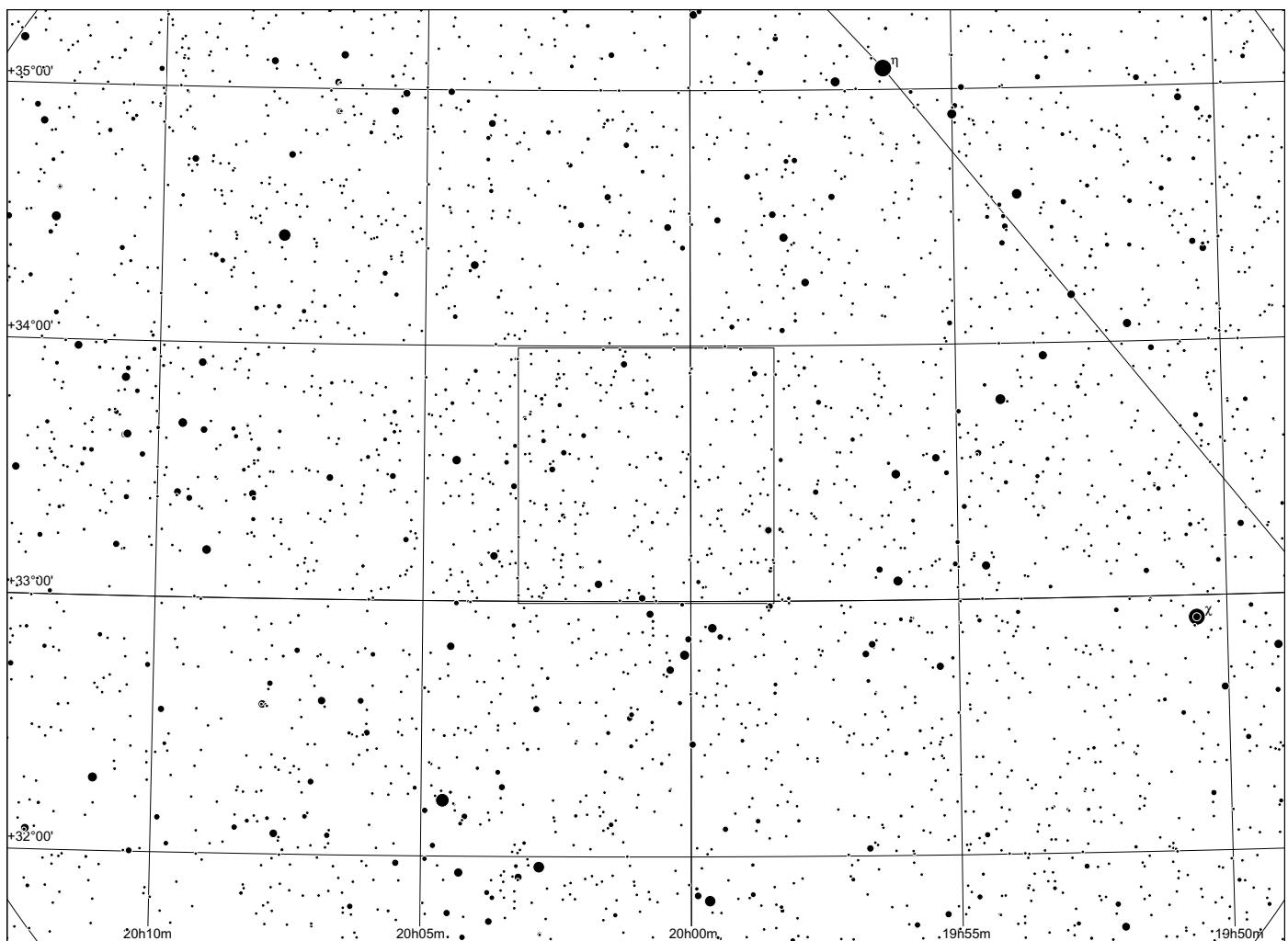
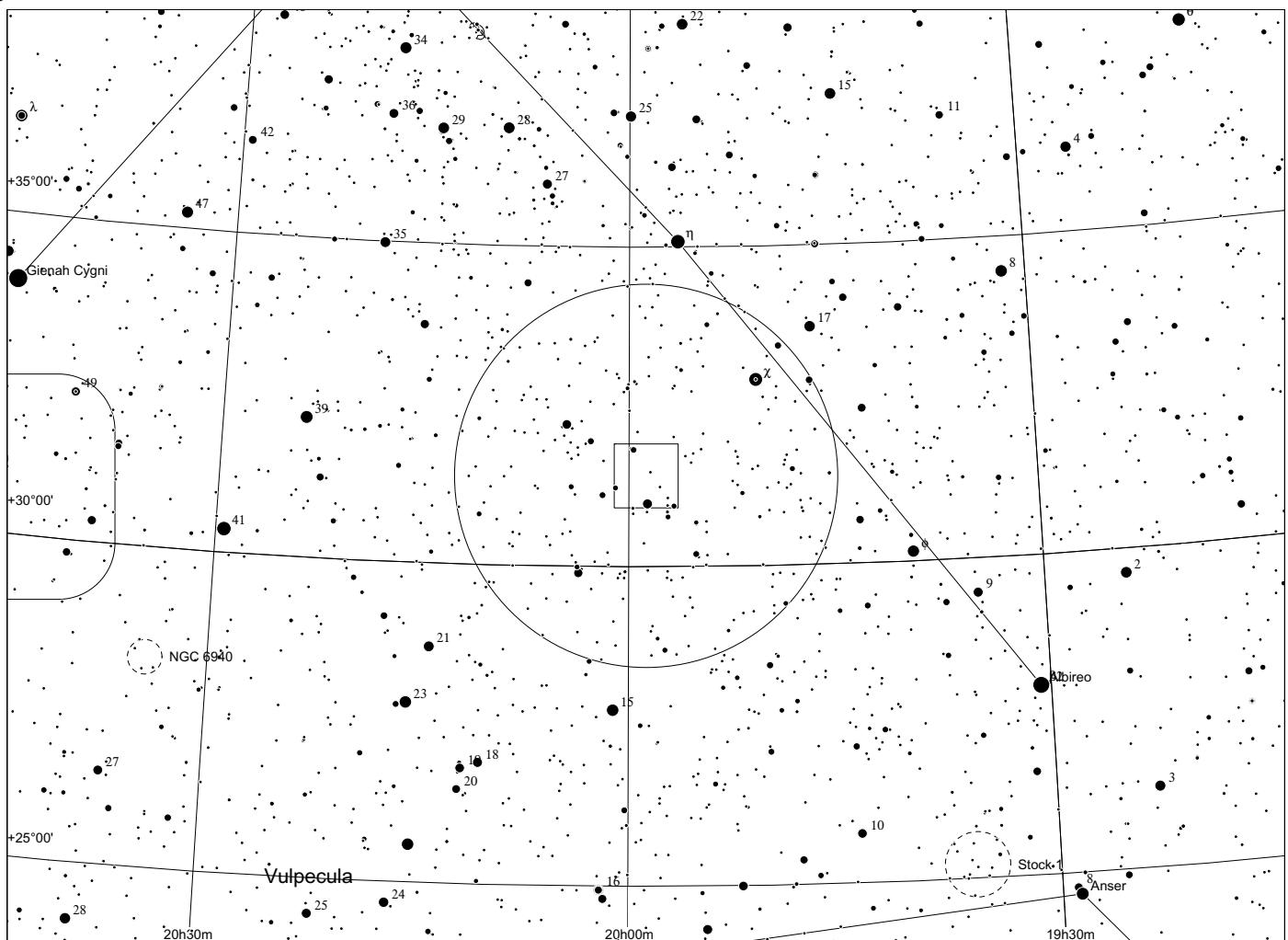
RGB Dean Salman

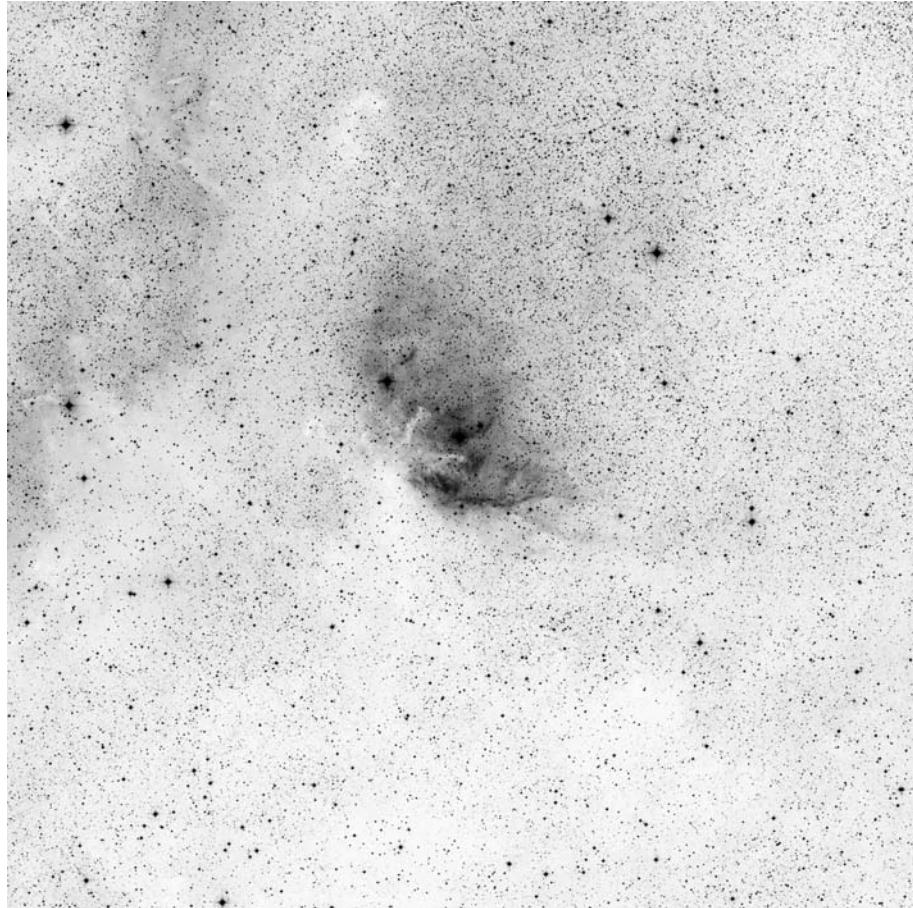
	other name	RA	dec	dia.	'	F	S	B
Sh 2-099		20 00 50.5	+33 29 34	5		3	2	3
Sh 2-100	NGC6857	20 01 50.6	+33 30 41	4		3	2	3

Distance: 8000 pc, Size: 11.6 pc, Source: 1982ApJS...49..183B, This HII region is part of the W58 radio complex.

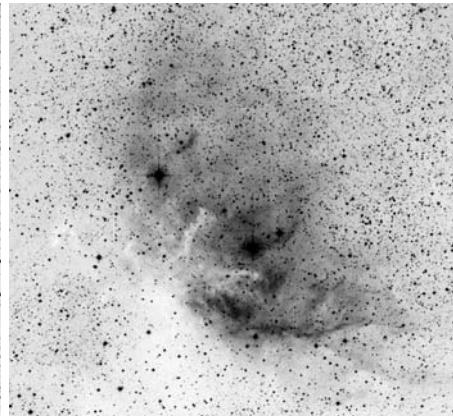
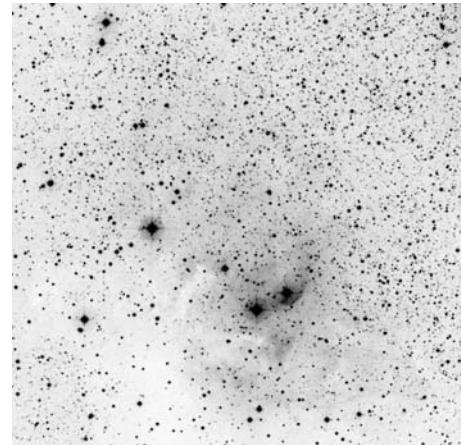
Distance: 7784 pc, Size: 6.1 pc, Source: 2003A&A...397..213P, Sh 2-100 is part of the star formation region W58. Sh 2-100 itself consists of two distinct nebulae - K3-50 (W58A) and NGC 6857.

Observing notes:





Sh 2 - 101
in Cygnus



POSS blue

POSS red

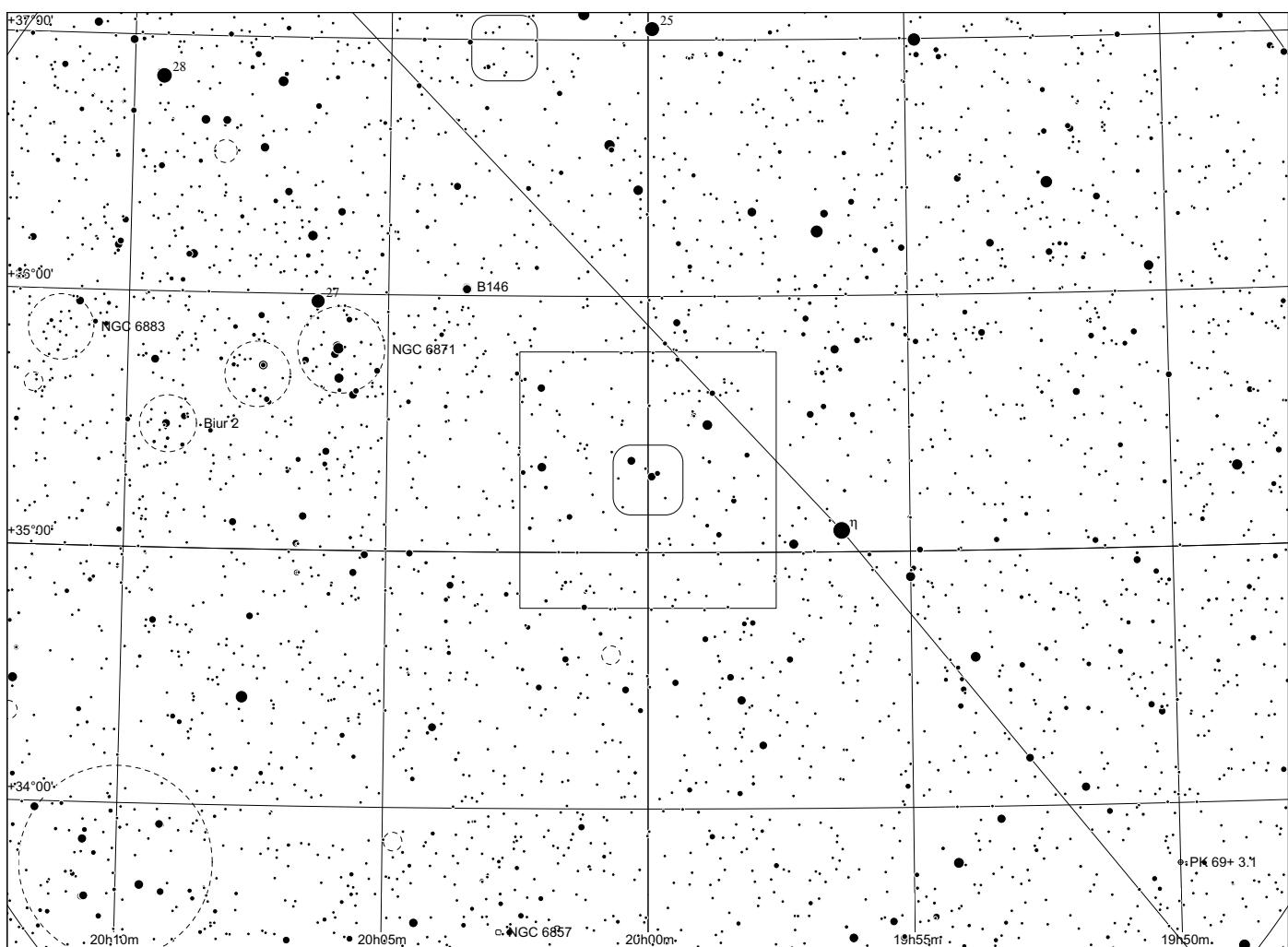
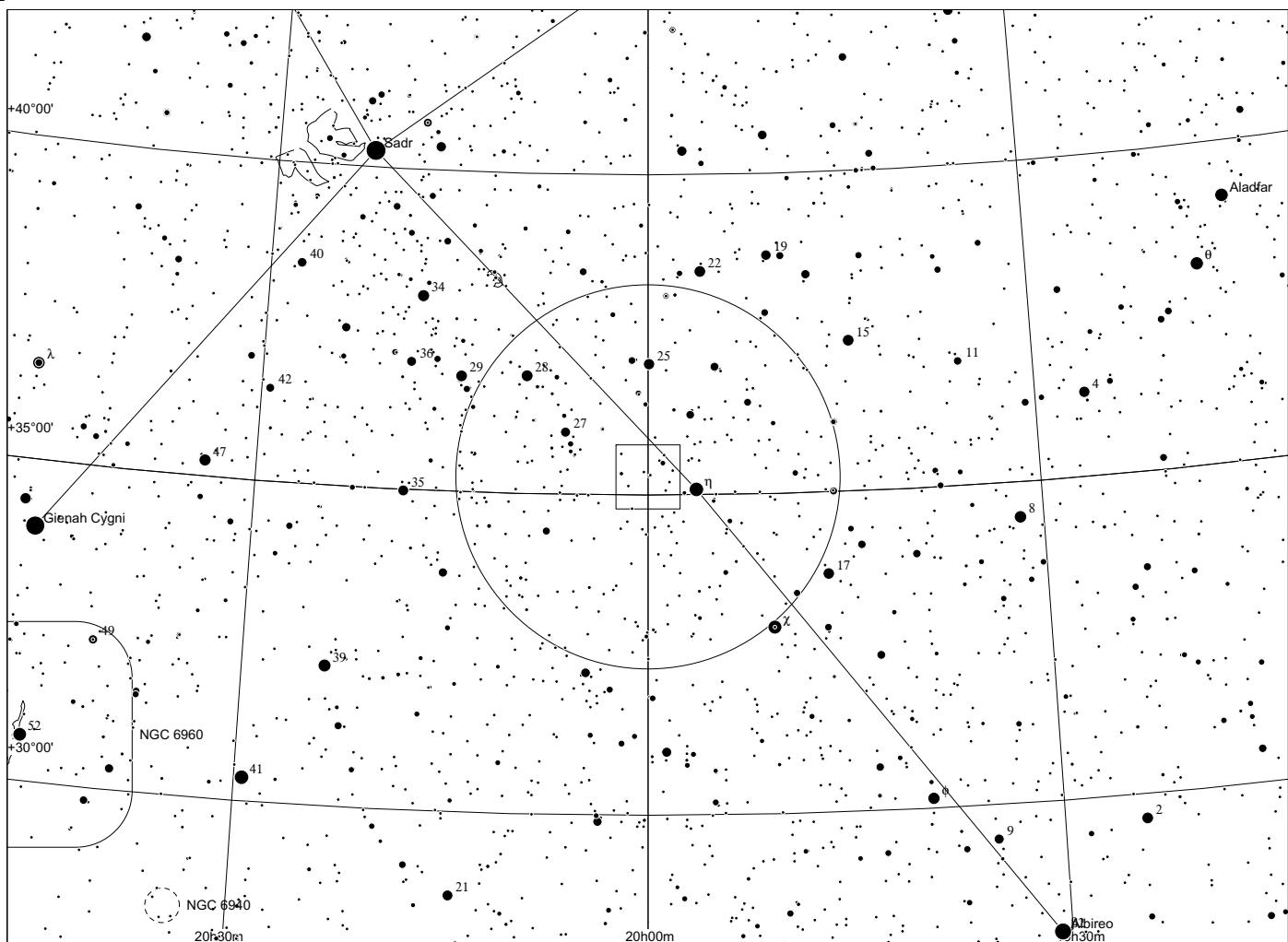
nb Ha/OIII/Hell Dean Salman

	other name	RA	dec	dia. '	F	S	B
Sh 2-101		19 59 56.8	+35 17 27	20	3	2	2

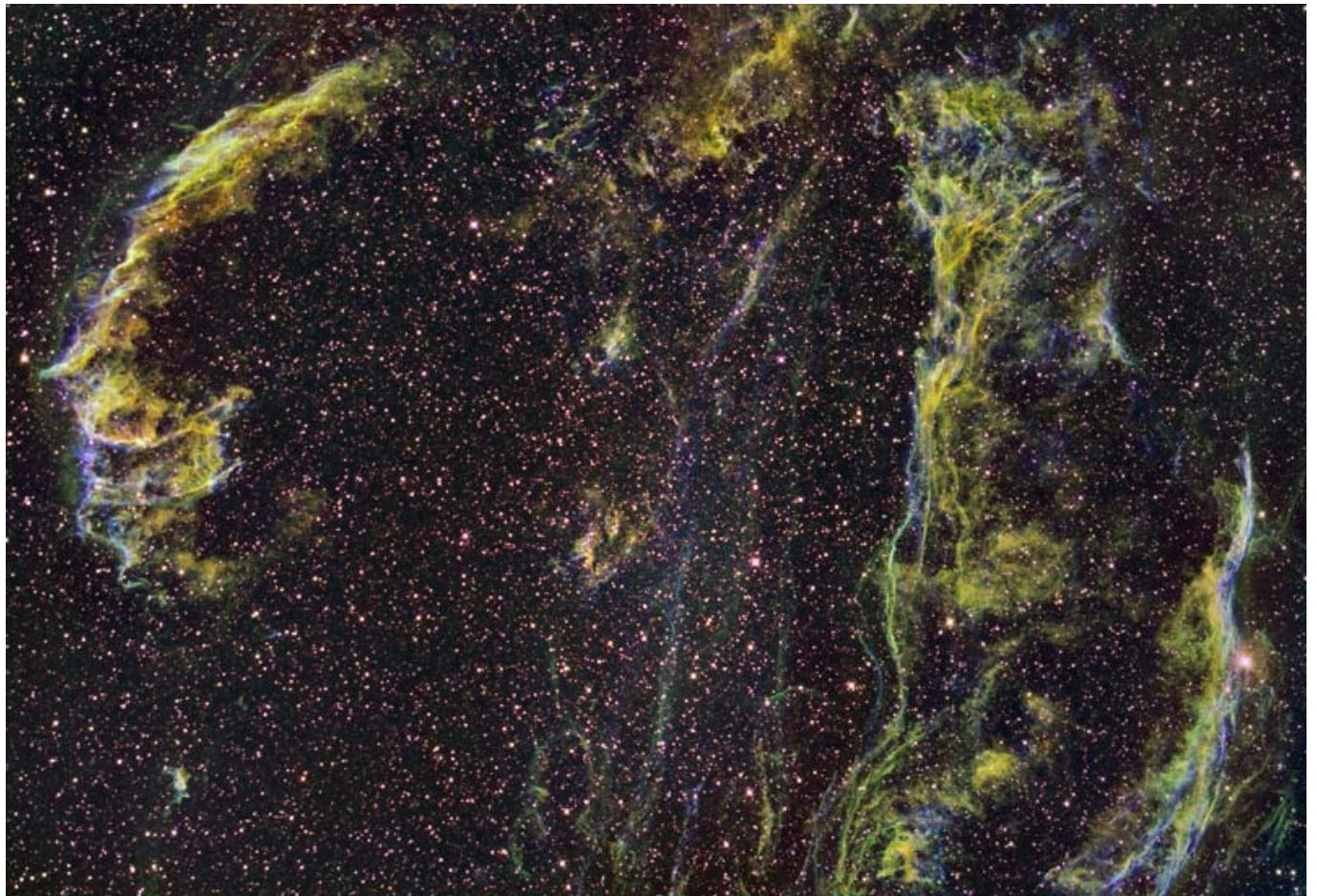
Distance: 2683 pc, Size: 2.7 pc, Source: 2003A&A...397..213P

The exciting star for the Tulip nebula is believed to be the O6.5III star HD 227018, which Humphreys places in the Cygnus OB3 association.

Observing notes:



Sh 2 - 103 in Cygnus



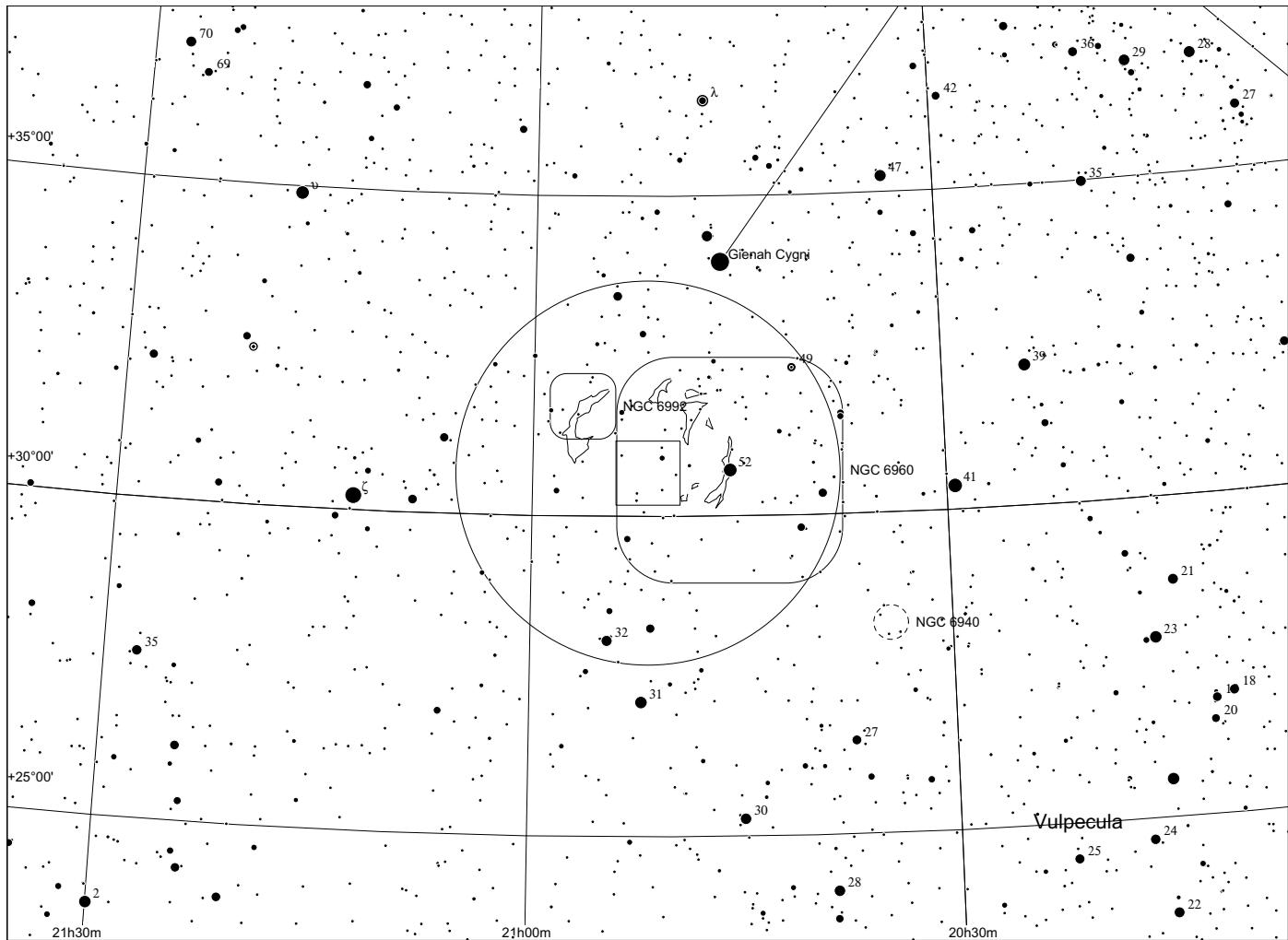
narrow band Dean Salman

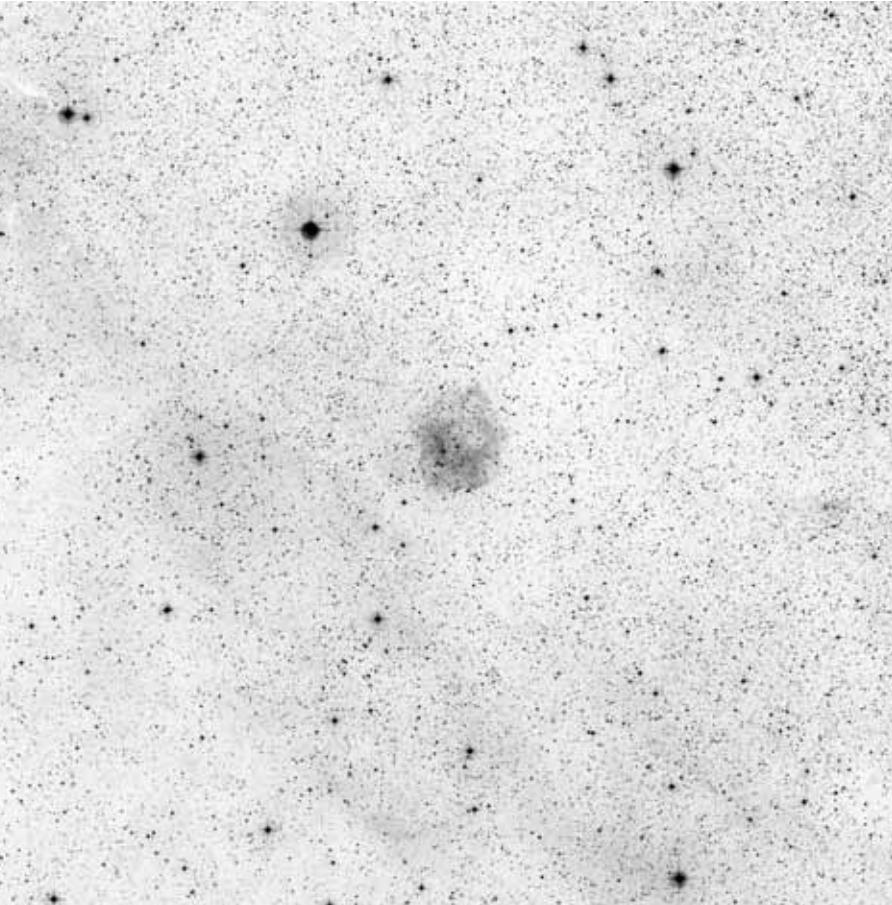
	other name	RA	dec	dia. '	F	S	B
Sh 2-103	Veil nebula	20 50 32.3	+30 55 25	210	3	3	3

Distance: 440 pc, Size: 26.9 pc, Source: 2004MNRAS.351..385L

This is the Cygnus Loop supernova remnant.

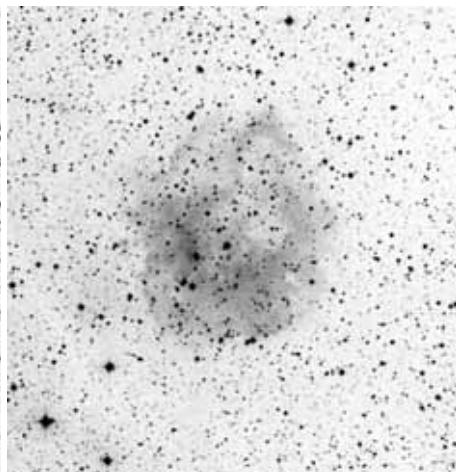
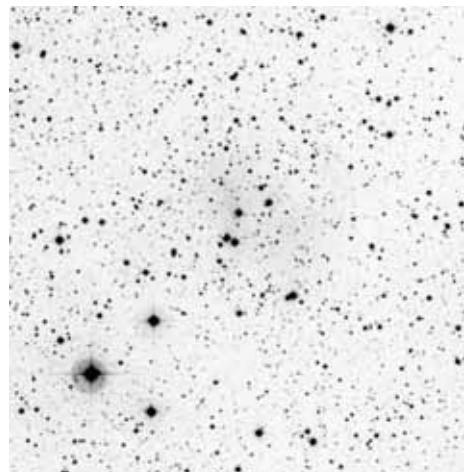
Observing notes:





**Sh 2 - 104
in Cygnus**

60x60, red



POSS blue

POSS red

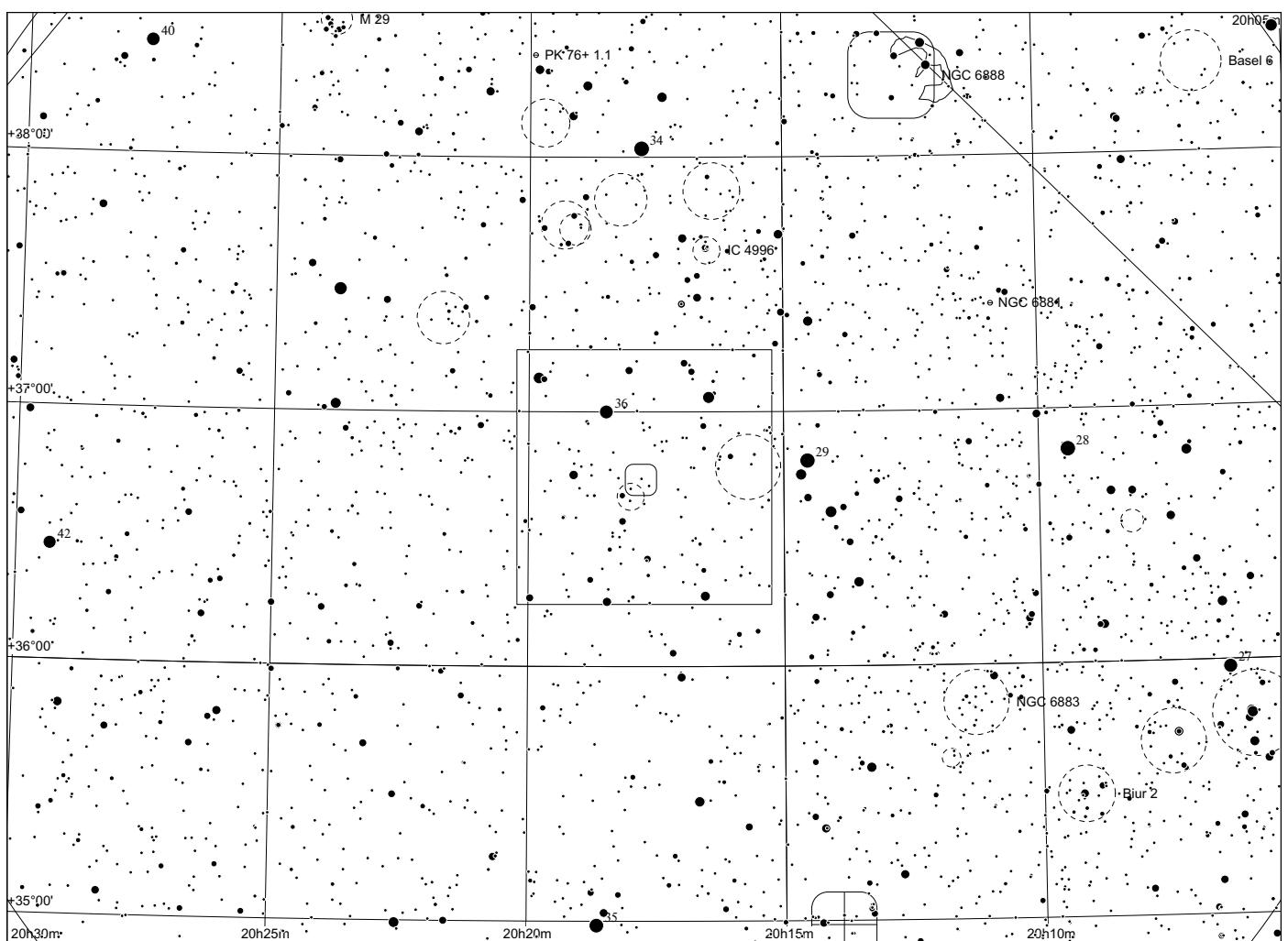
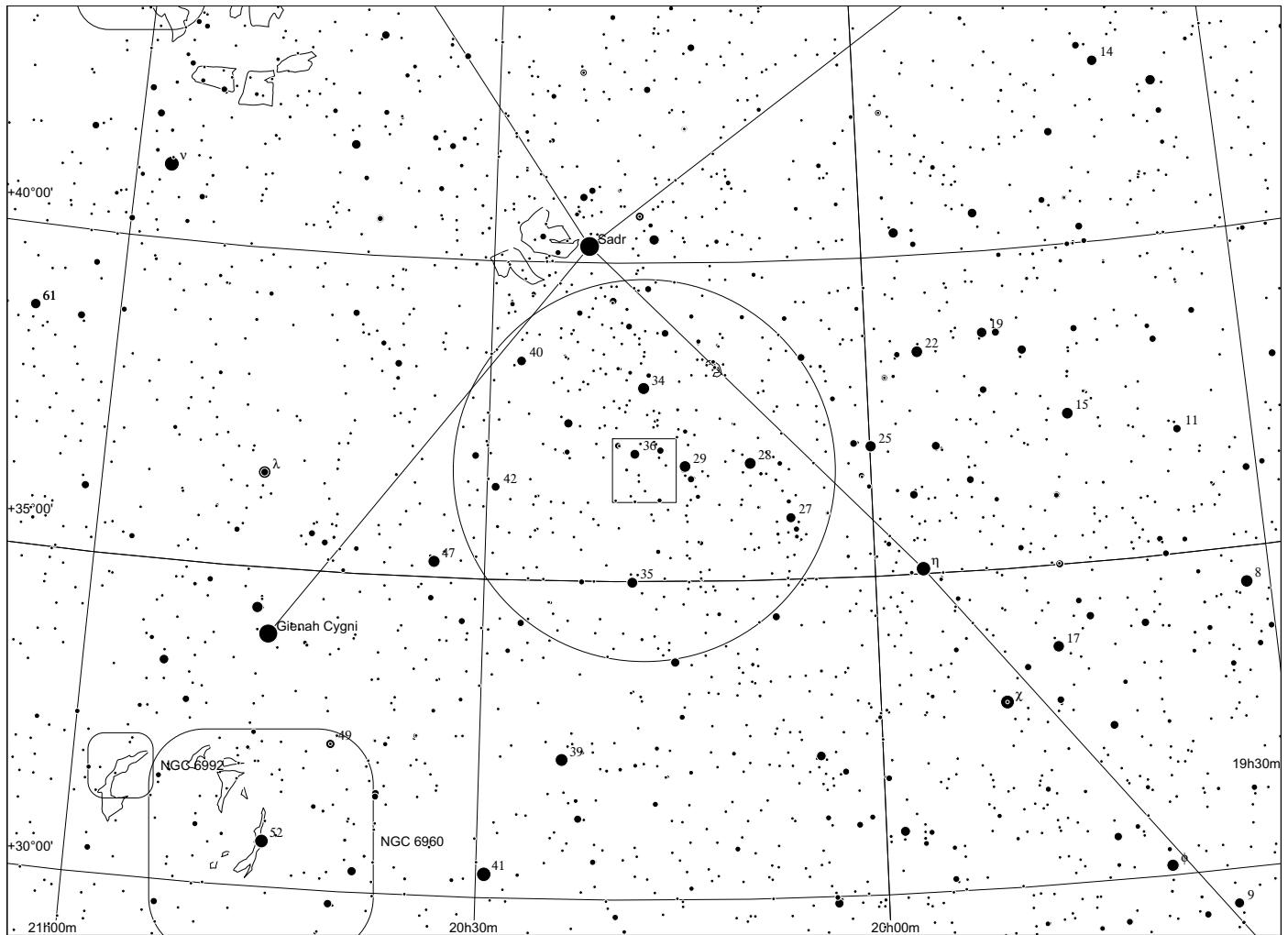
composite

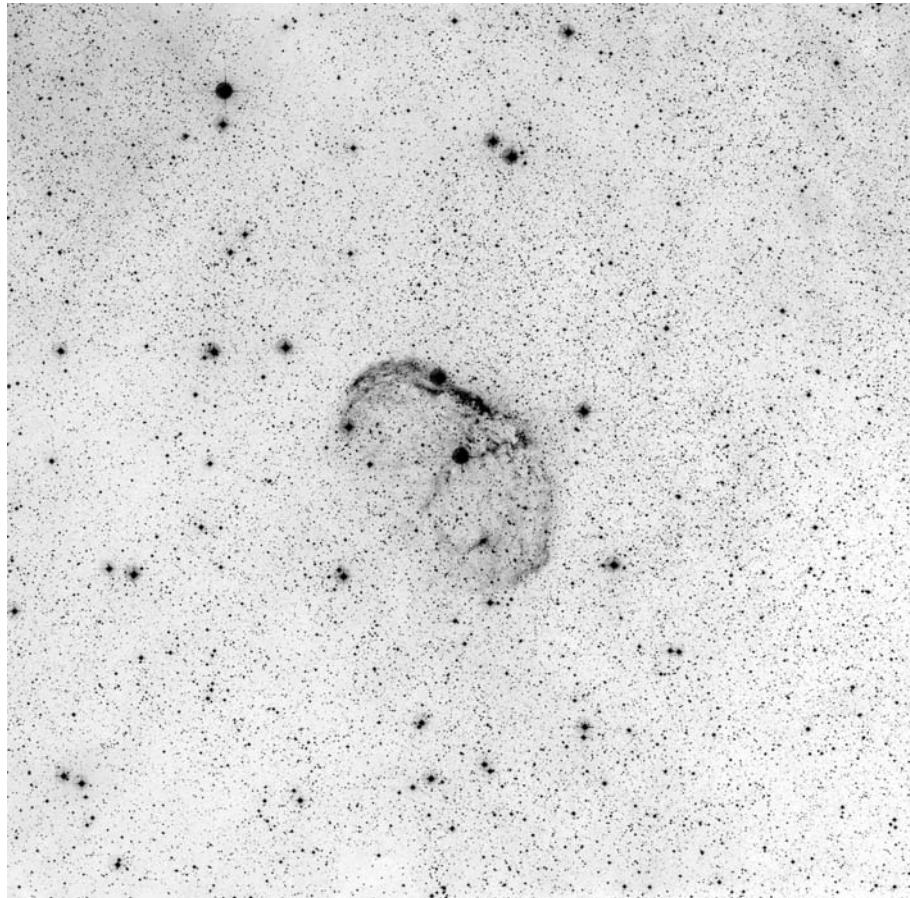
	other name	RA	dec	dia. '	F	S	B
Sh 2-104		20 17 44.6	+36 44 40	7	1	2	2

Distance: 4400 pc, Size: 9.0 pc, Source: 1982ApJS...49..183B

About 450 solar masses of gas form a shell around the ionising O6V star in this HII region located in the outer galaxy.

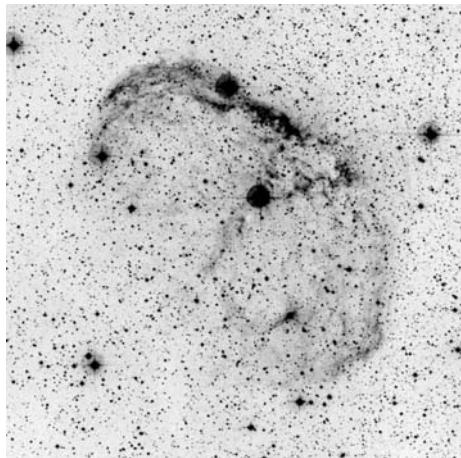
Observing notes:



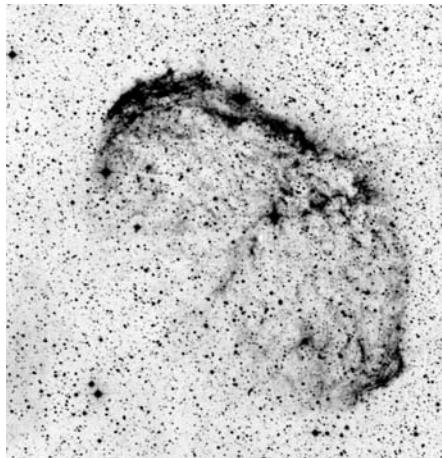


**Sh 2 - 105
in Cygnus**

60x60, blue



POSS blue



POSS red



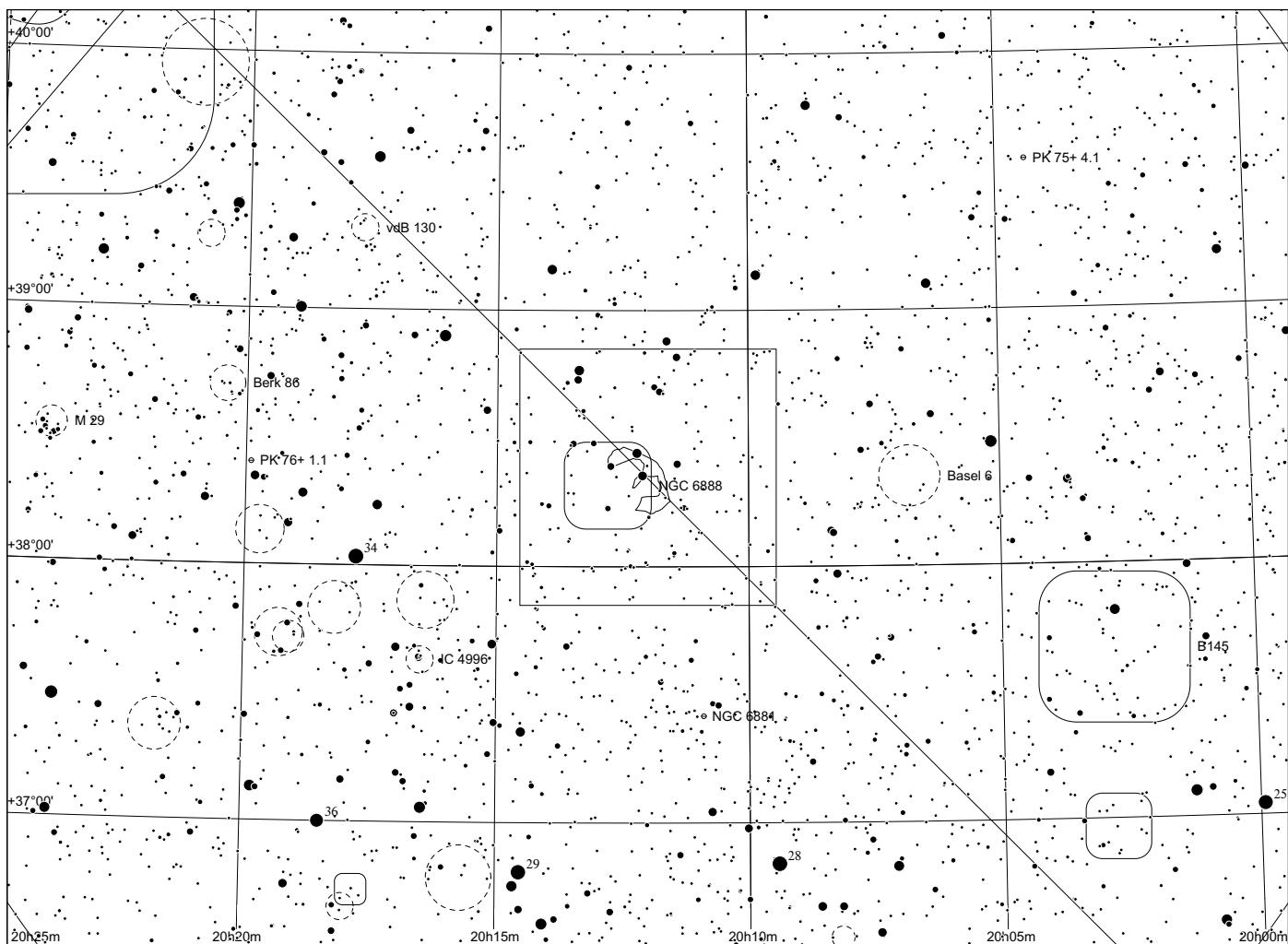
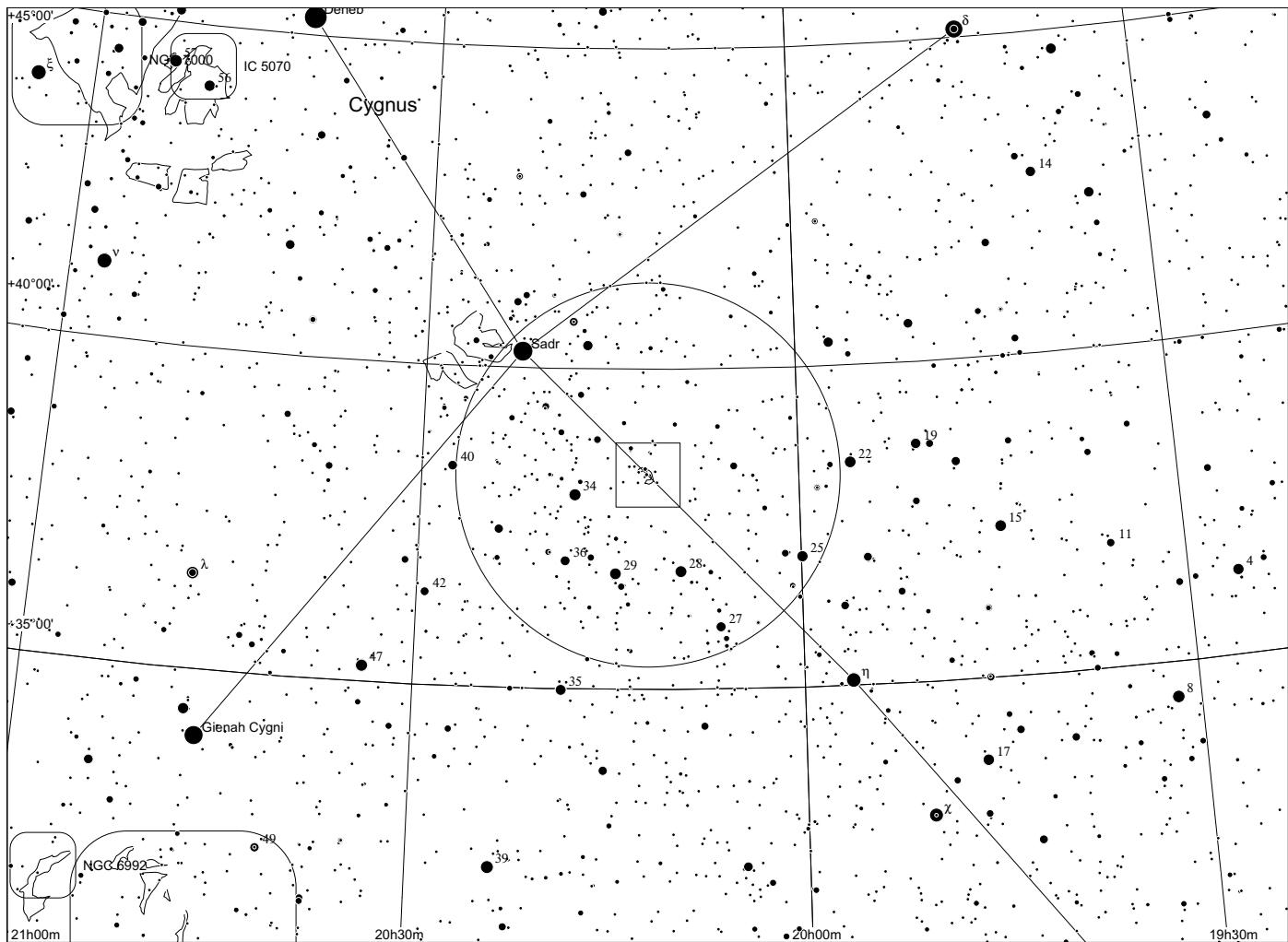
RGB Dean Salman

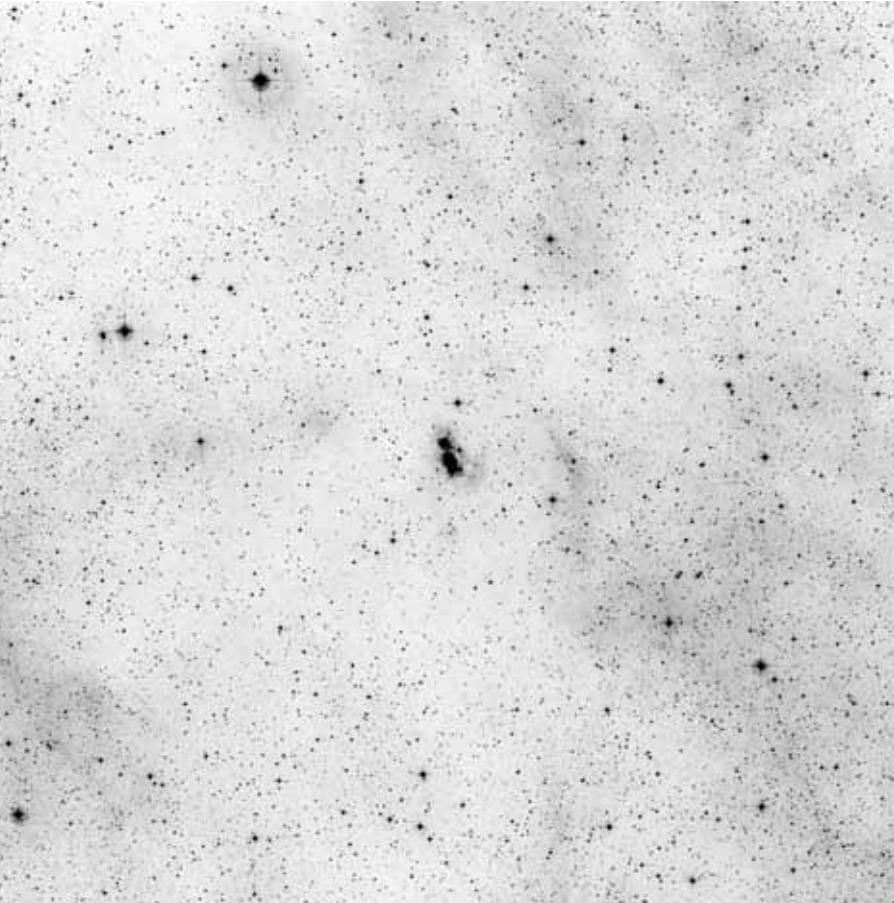
	other name	RA	dec	dia. '	F	S	B
Sh 2-105	NGC<6888 = Crescent Nebula	20 12 02.4	+38 20 59	18	2	3	3

Distance: 1200 pc, Size: 6.3 pc, Source: 1982ApJS...49..183B

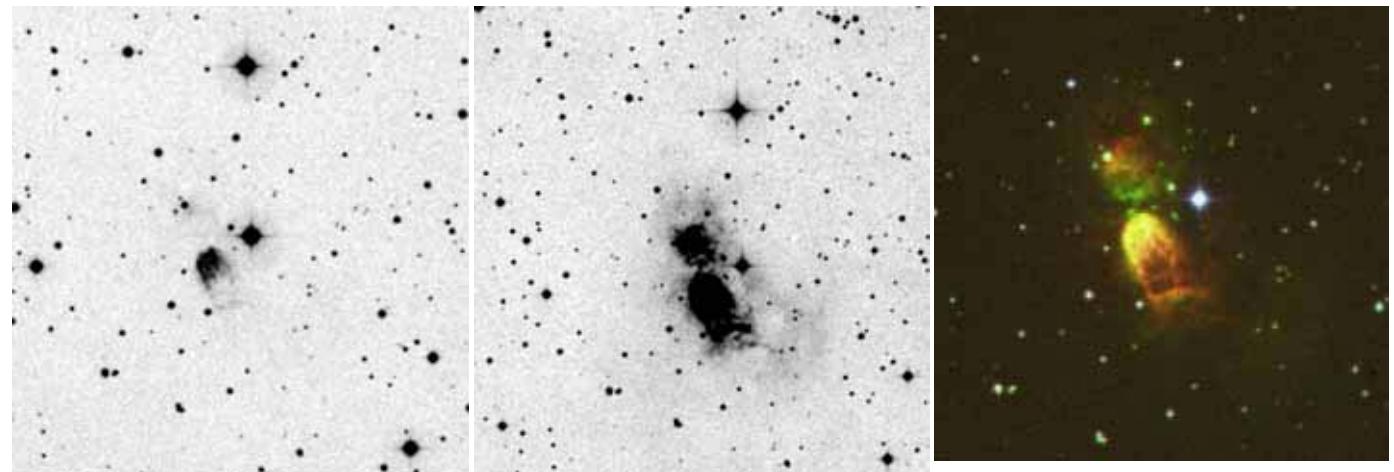
NGC 6888, the Crescent nebula, is a ring nebula surrounding the Wolf Rayet star WR 136.

Observing notes:





Sh 2 - 106
in Cygnus



POSS blue

POSS red

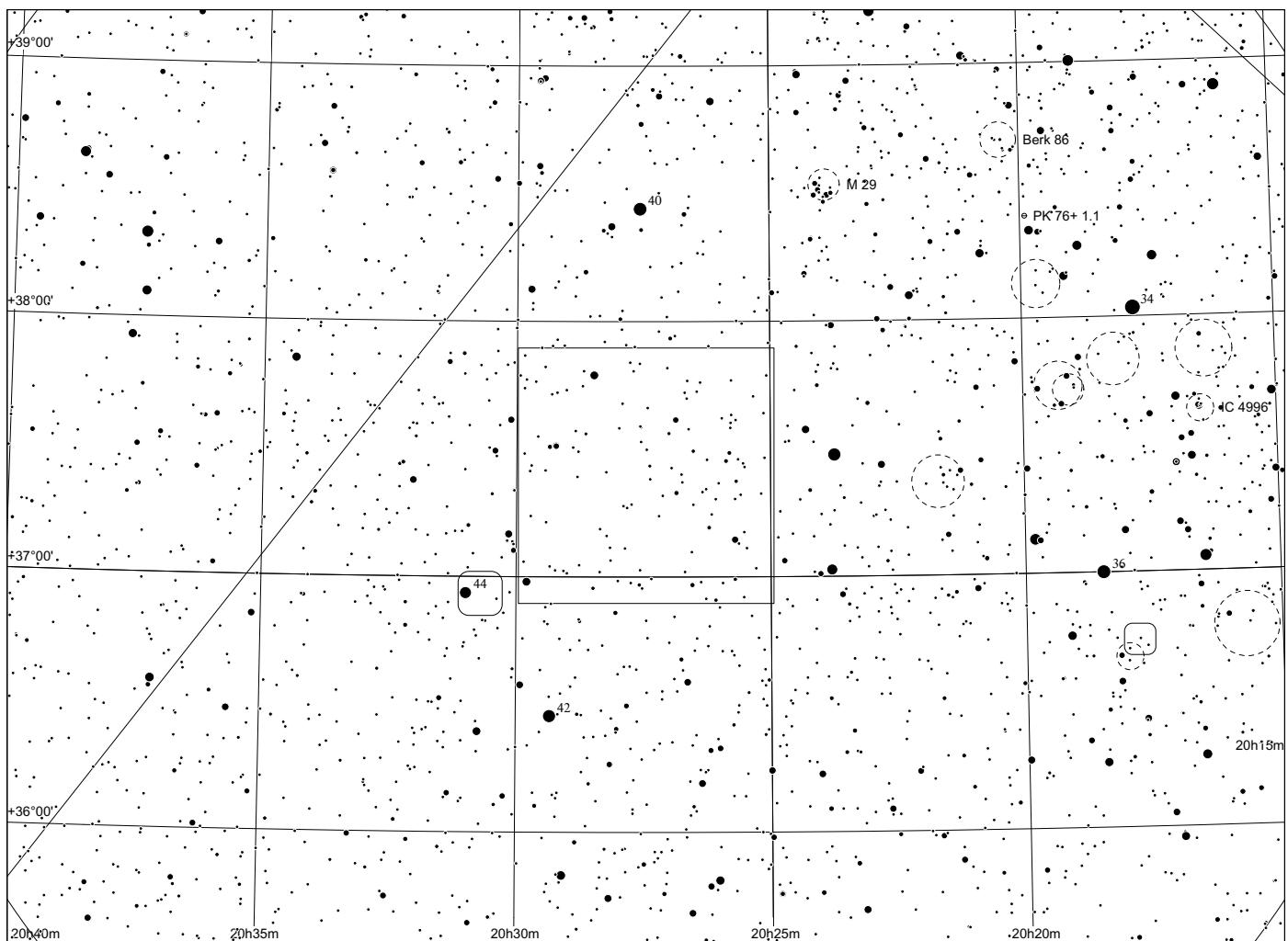
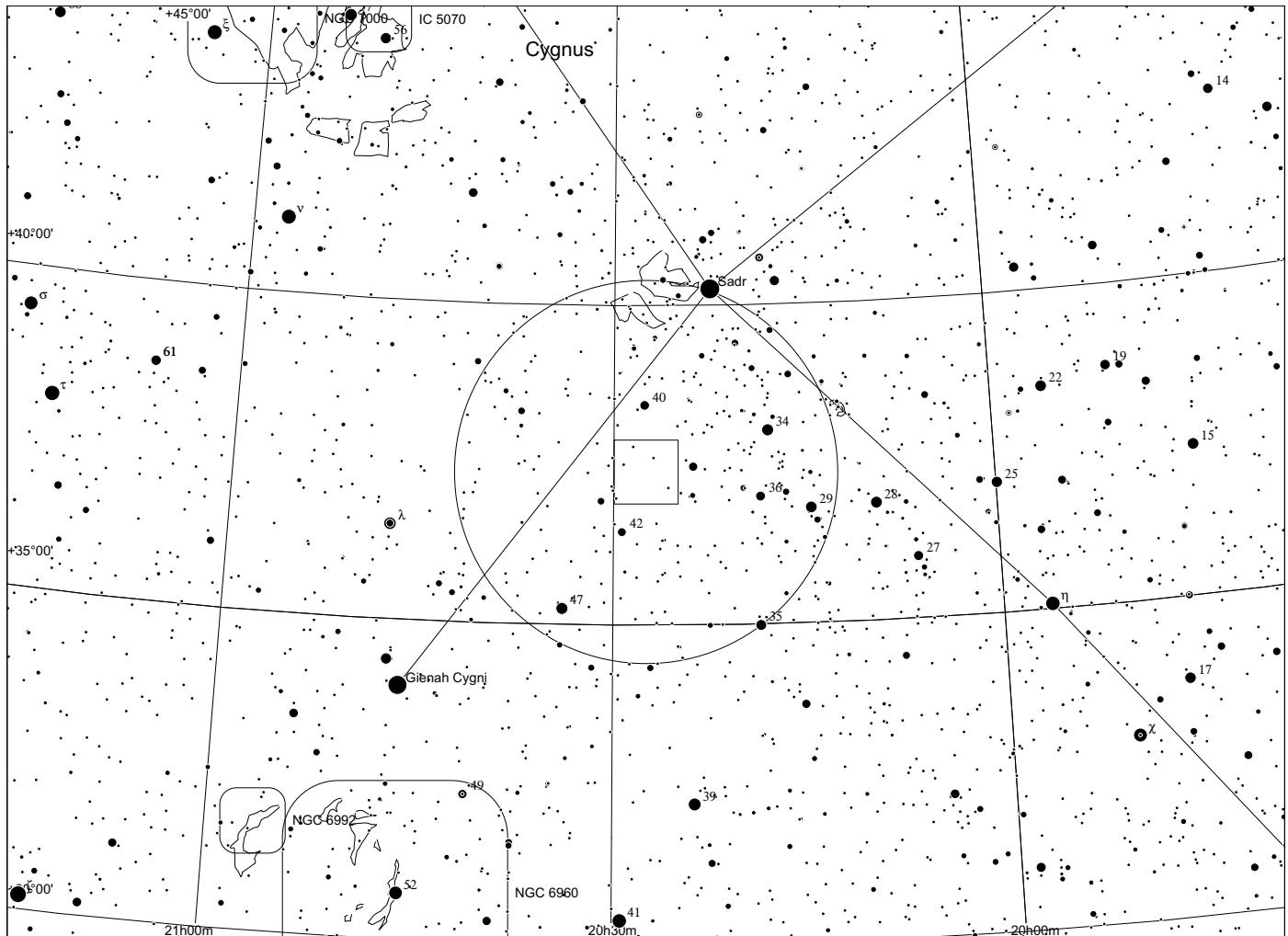
composite

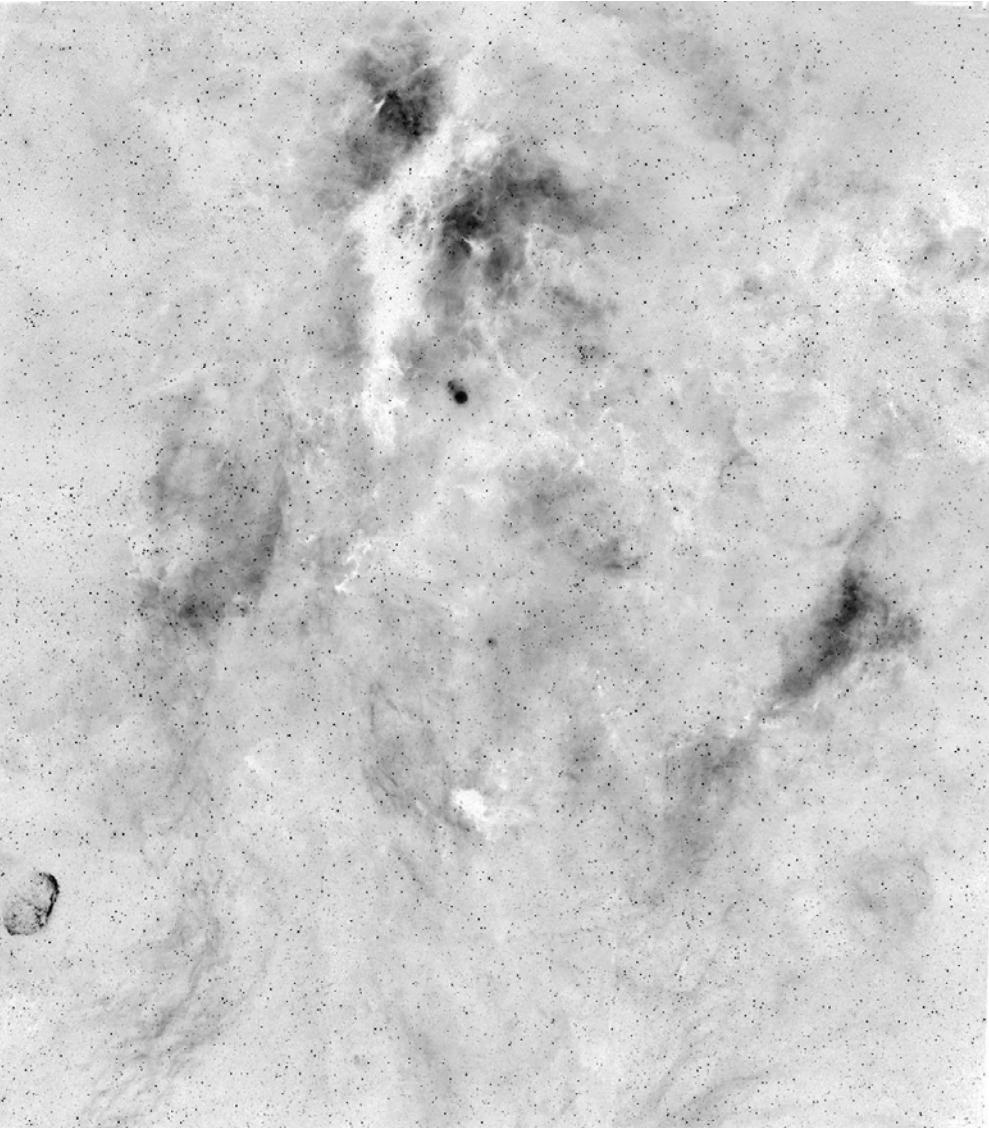
	other name	RA	dec	dia. '	F	S	B
Sh 2-106		20 27 26.9	+37 23 49	3	3	2	3

Distance: 600 pc, Size: 0.5 pc, Source: 2004A&A...424..965G

Despite its appearance, this is not a planetary nebula, but a giant molecular cloud and star formation region ionised by an O8 star, S106IR.

Observing notes:





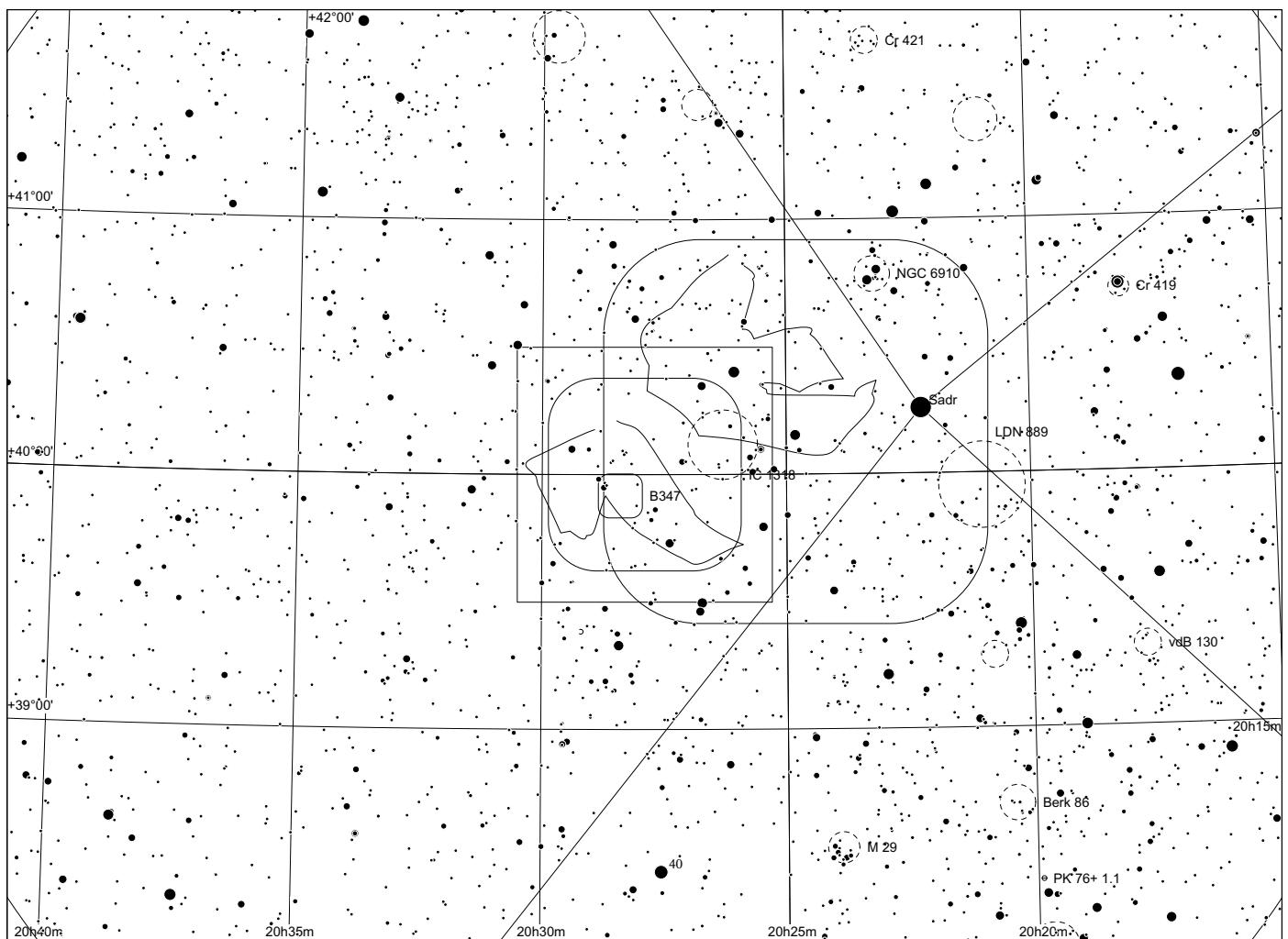
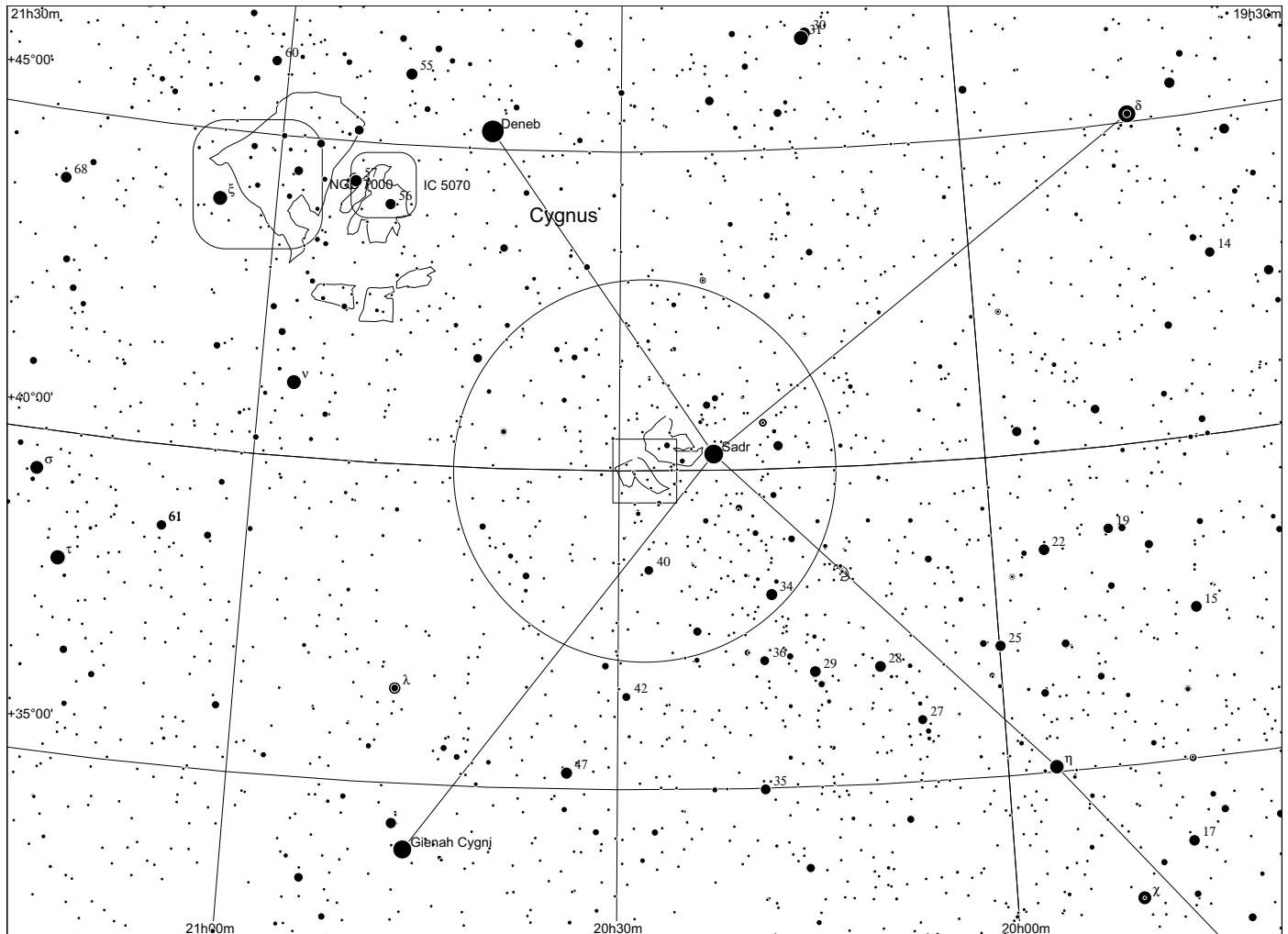
Sh 2 - 108
in Cygnus

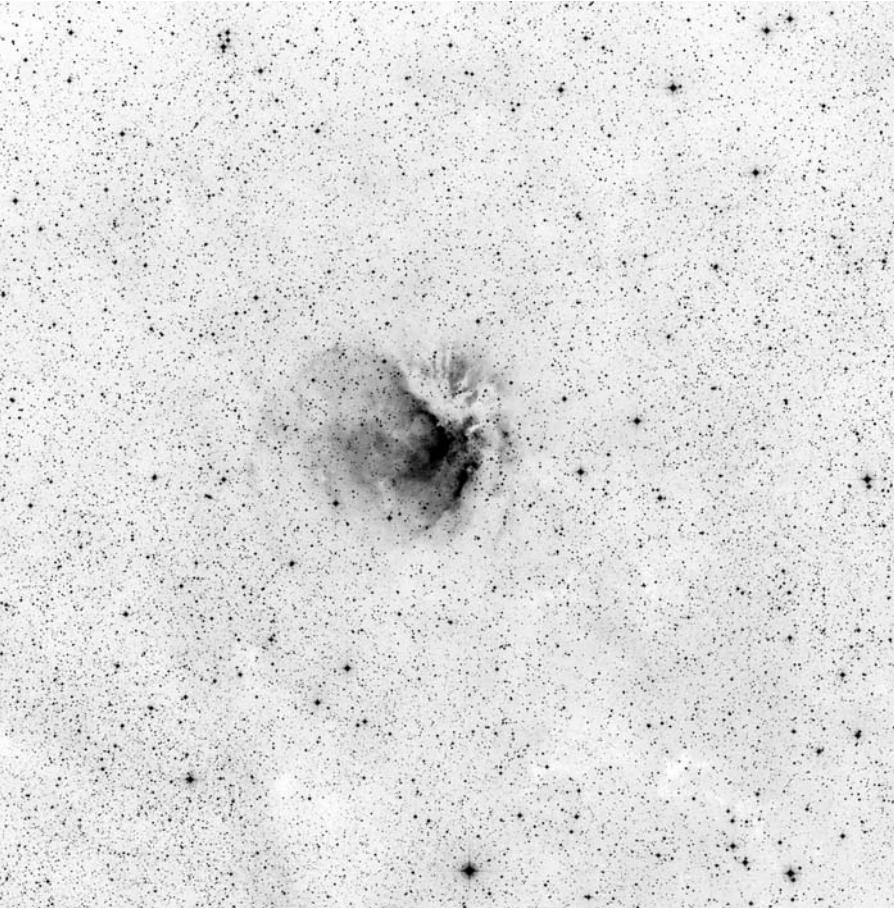
	other name	RA	dec	dia. '	F	S	B
Sh 2-108	IC 1318	20 22 34.8	+40 15 15	180	3	3	3

Distance: 1500 pc, Size: 78.6 pc, Source: 1982ApJS...49..183B

Sometimes called the Gamma Cygni nebula because of the foreground appearance of the F8Iab supergiant, in fact this nebula lies far beyond the star in the depths of the Cygnus complex.

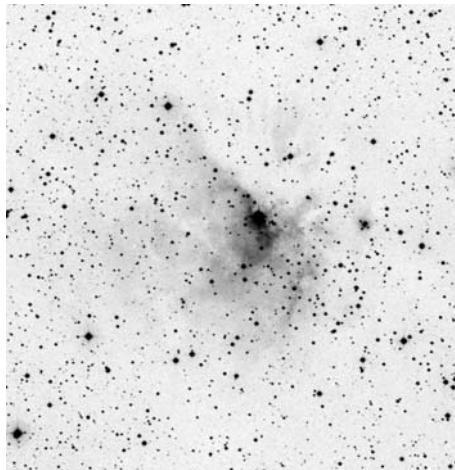
Observing notes:



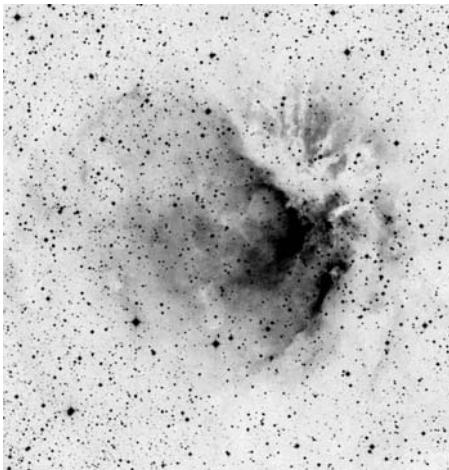


**Sh 2 - 112
in Cygnus**

60x60, red



POSS blue



POSS red



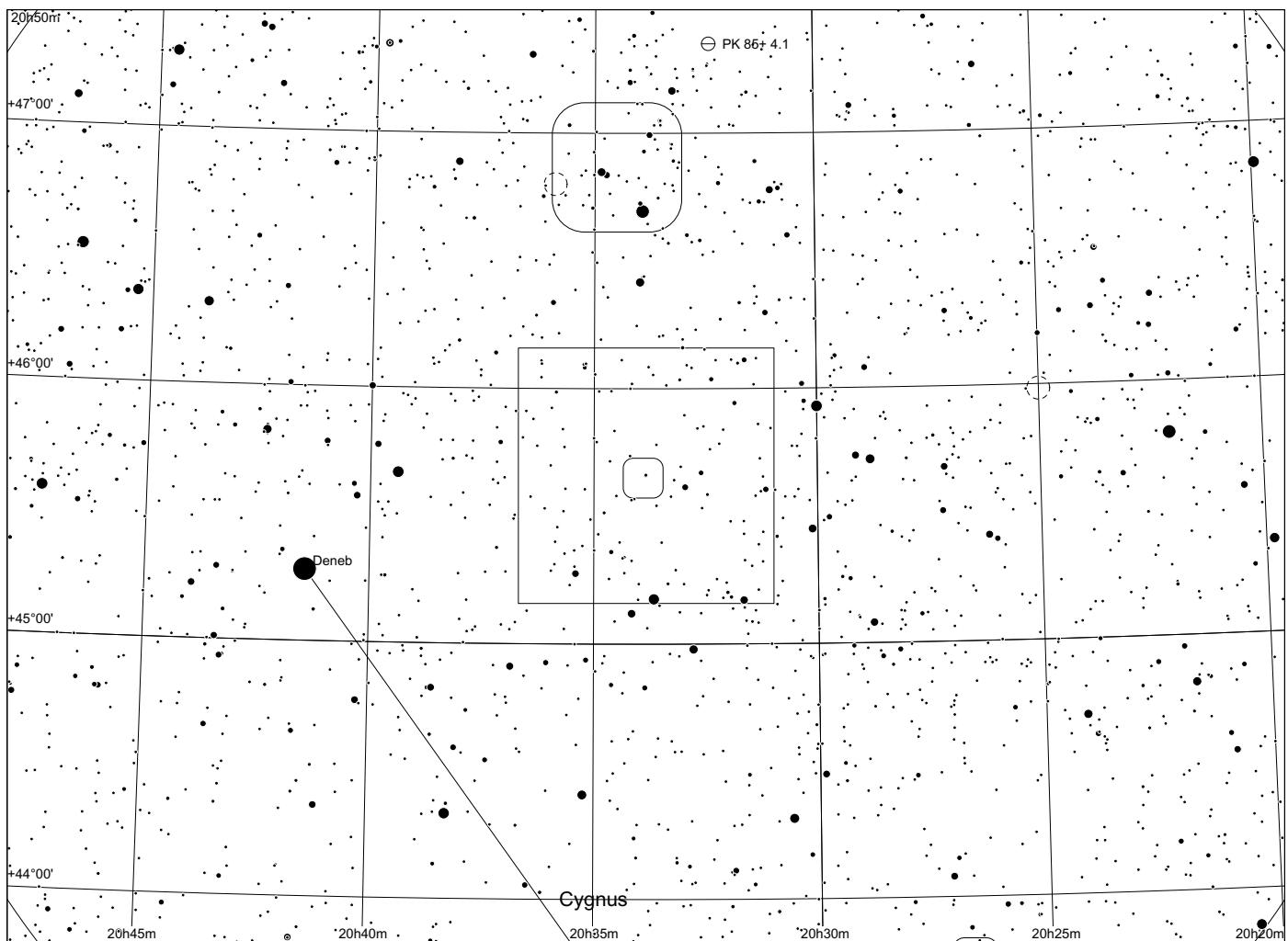
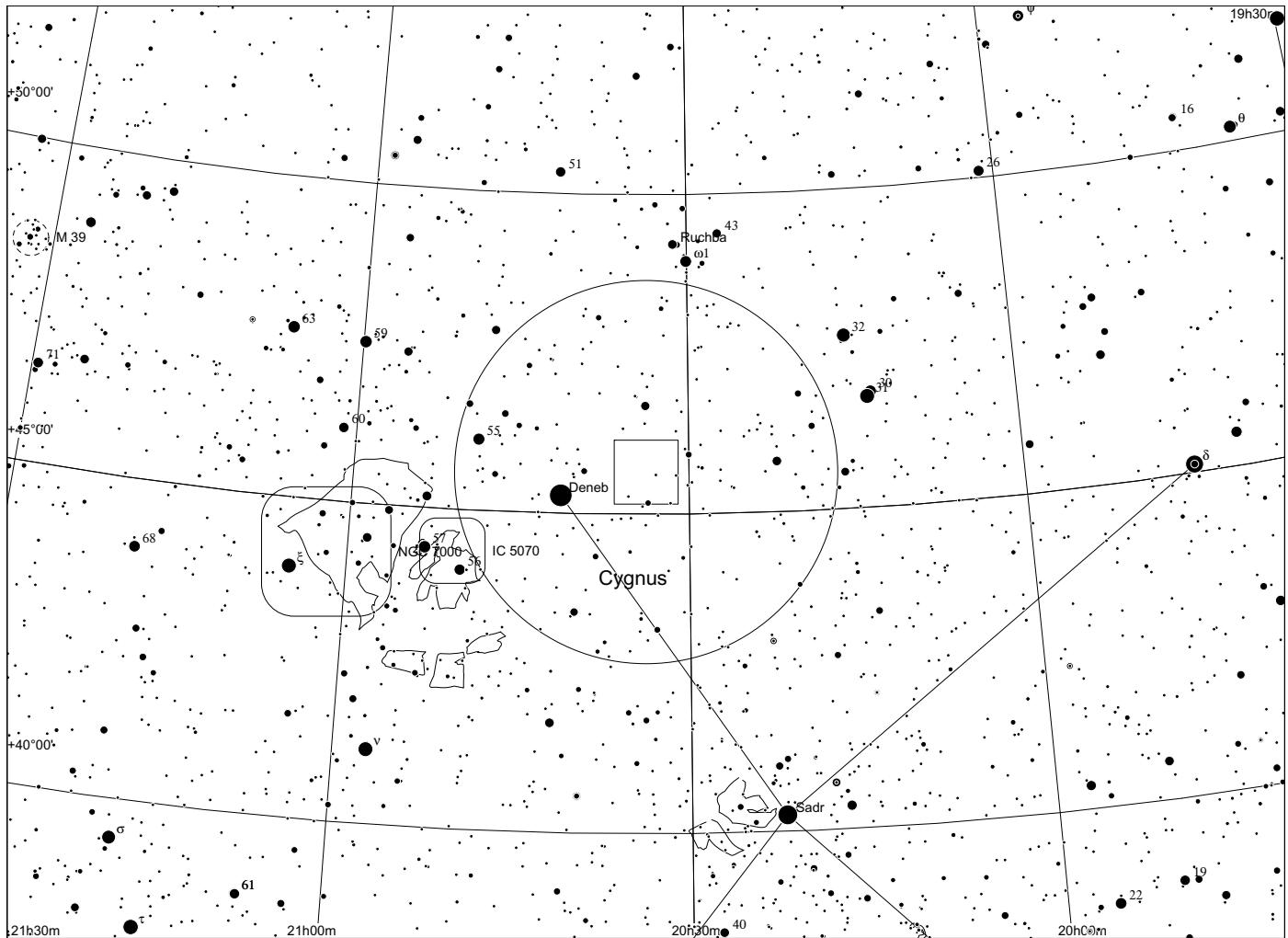
Narrowband Dean Salman

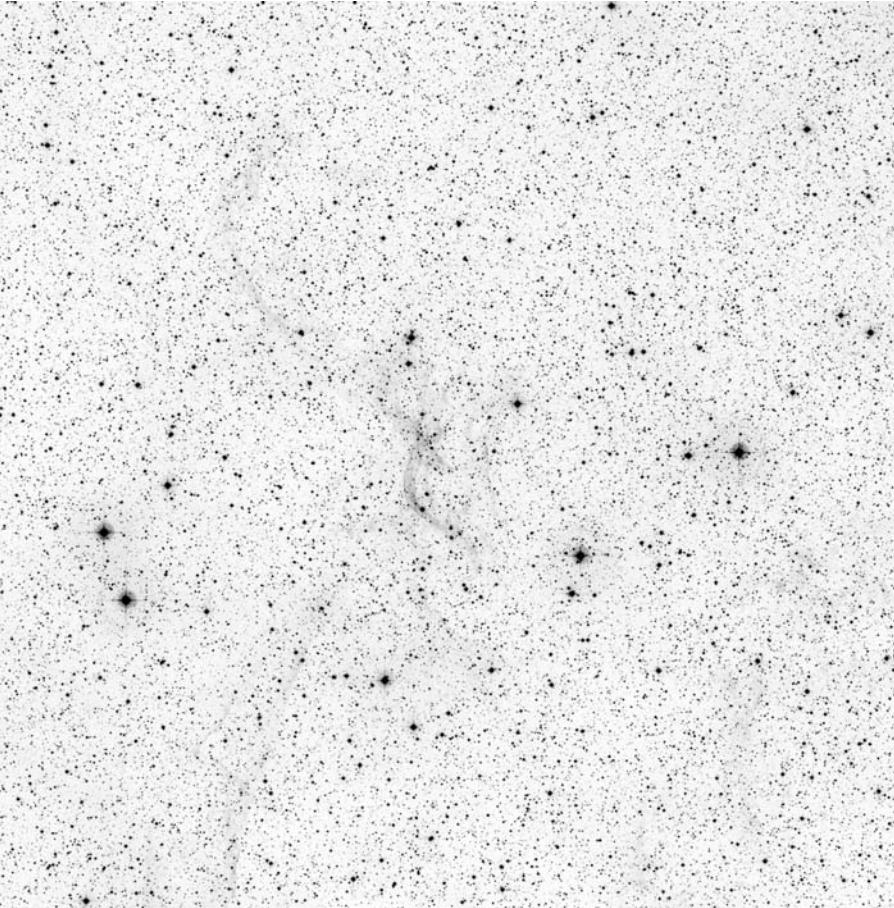
	other name	RA	dec	dia. '	F	S	B
Sh 2-112		20 33 50.2	+45 39 35	15	1	2	2

Distance: 1740 pc, Size: 7.6 pc, Source: 1985A&AS...61..537L

The exciting star for this nebula is the O8V class star BD+45 3216 (SAO 49801). The average distance of the stars associated with this nebula is 1740 pc.

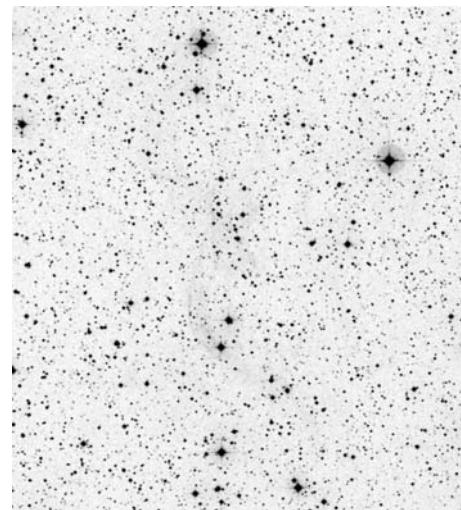
Observing notes:



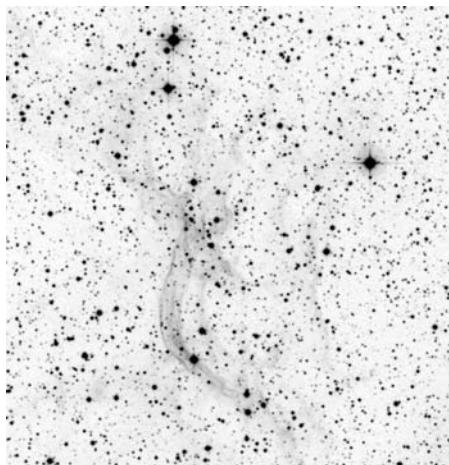


**Sh 2 - 114
in Cygnus**

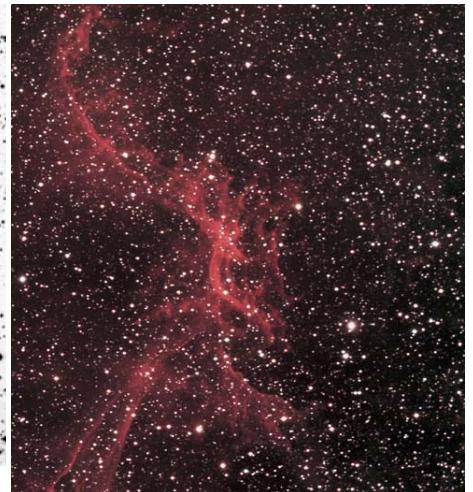
60x60, red



POSS blue



POSS red



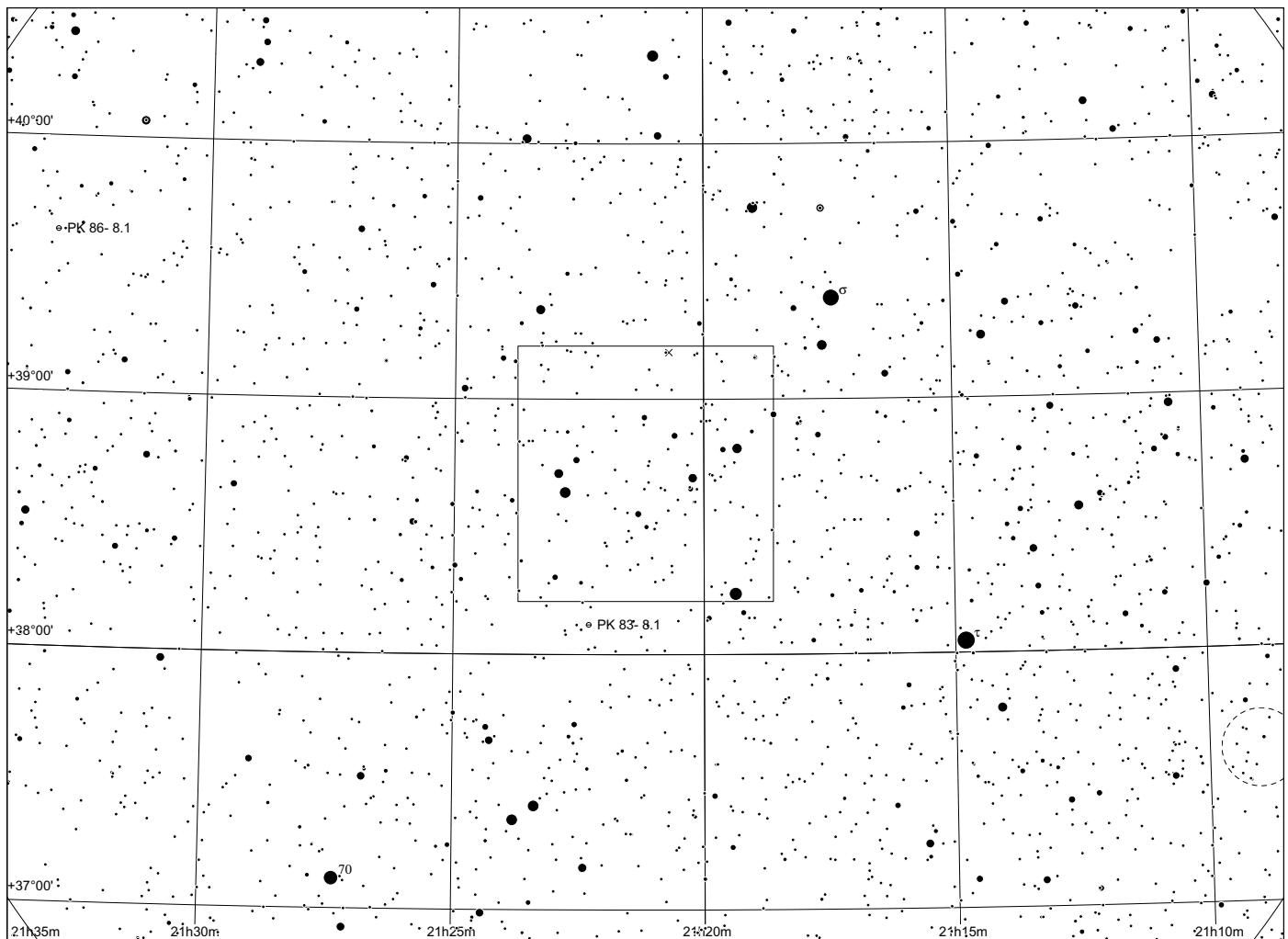
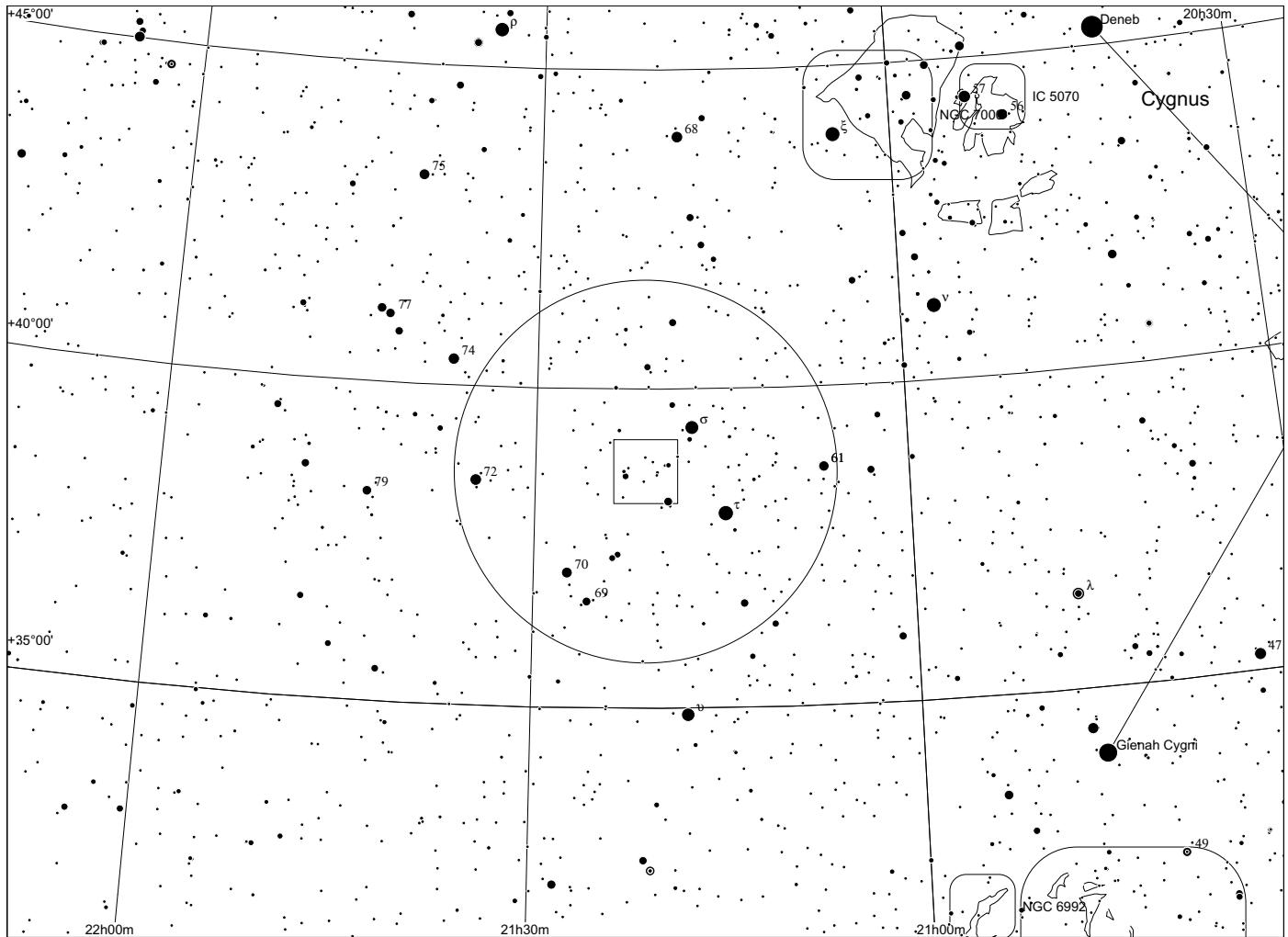
RGB Dean Salman

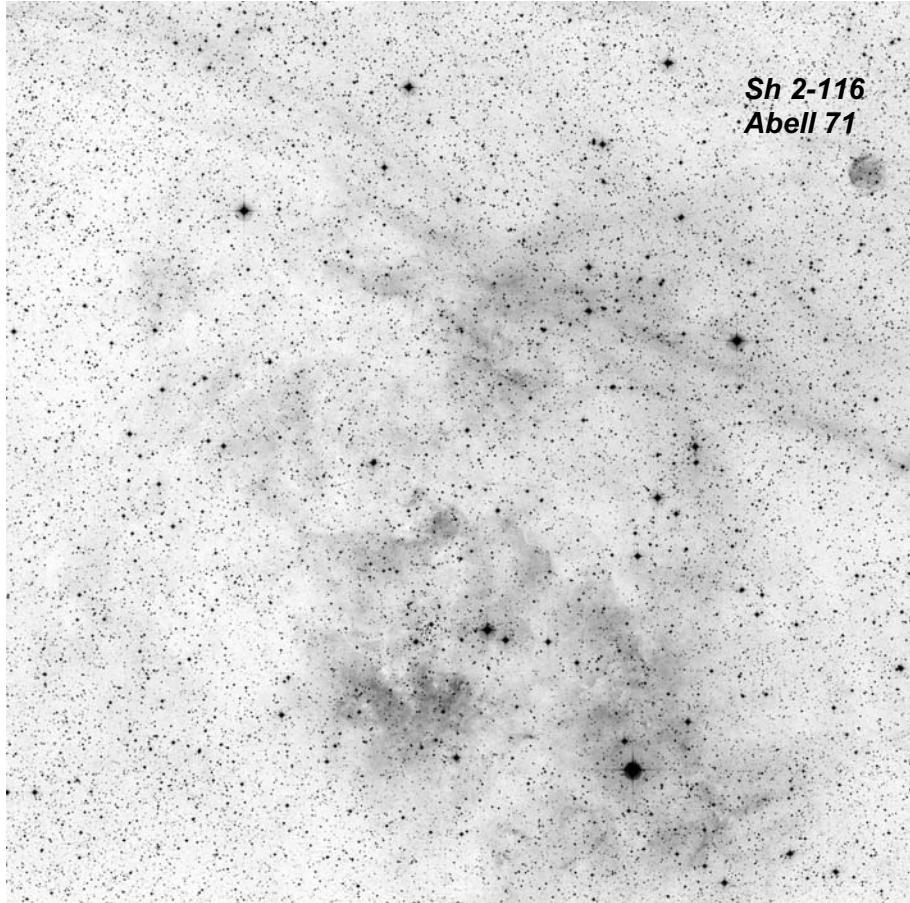
	other name	RA	dec	dia. '	F	S	B
Sh 2-114		21 21 10.5	+38 42 31	9	3	3	2

Distance: 4500 pc, Size: 26.2 pc, Source: 2004BASI...32..335G

Sh 2-113 and Sh 2-114 form, respectively, the southern and northern portions of a filamentary circle that resembles a supernova remnant. However, no supernova remnant appears to be recorded for this location. The distance reference for Sh 2-114 is incorrect and a correct one should be assigned.

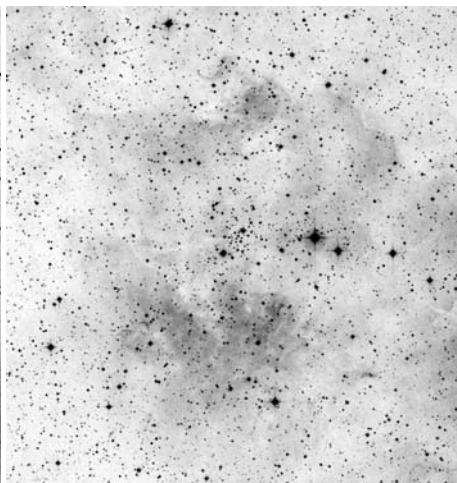
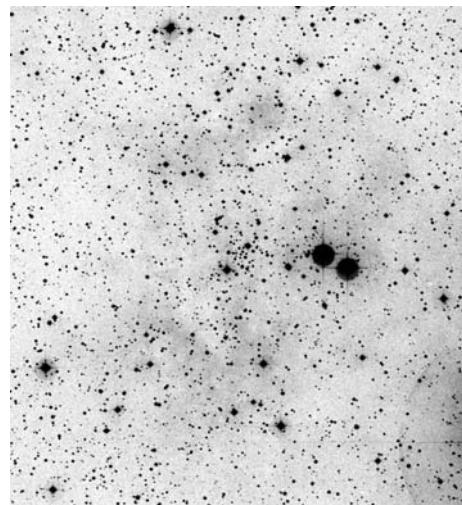
Observing notes:





**Sh 2 - 115
in Cygnus**

60x60, red

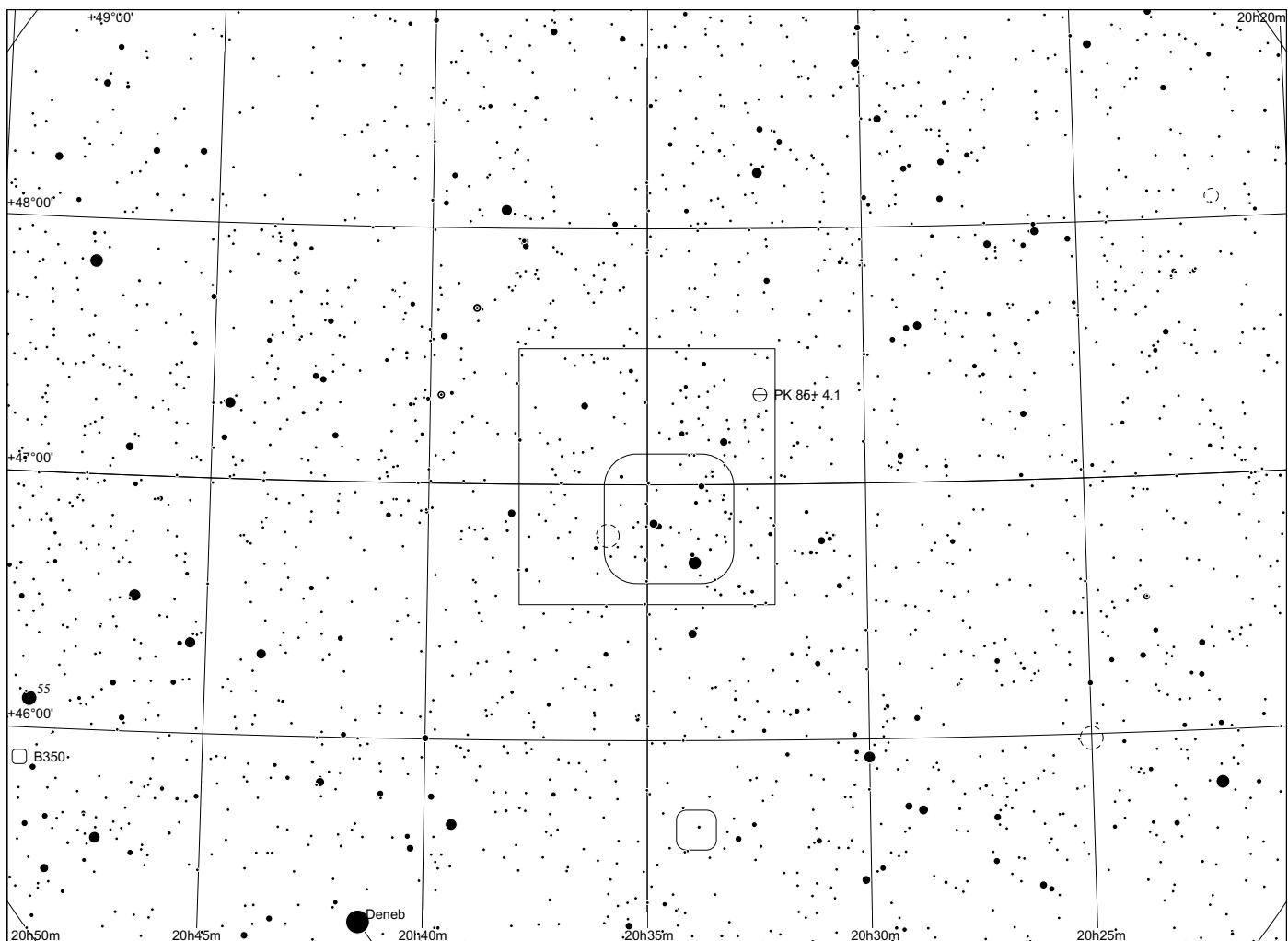
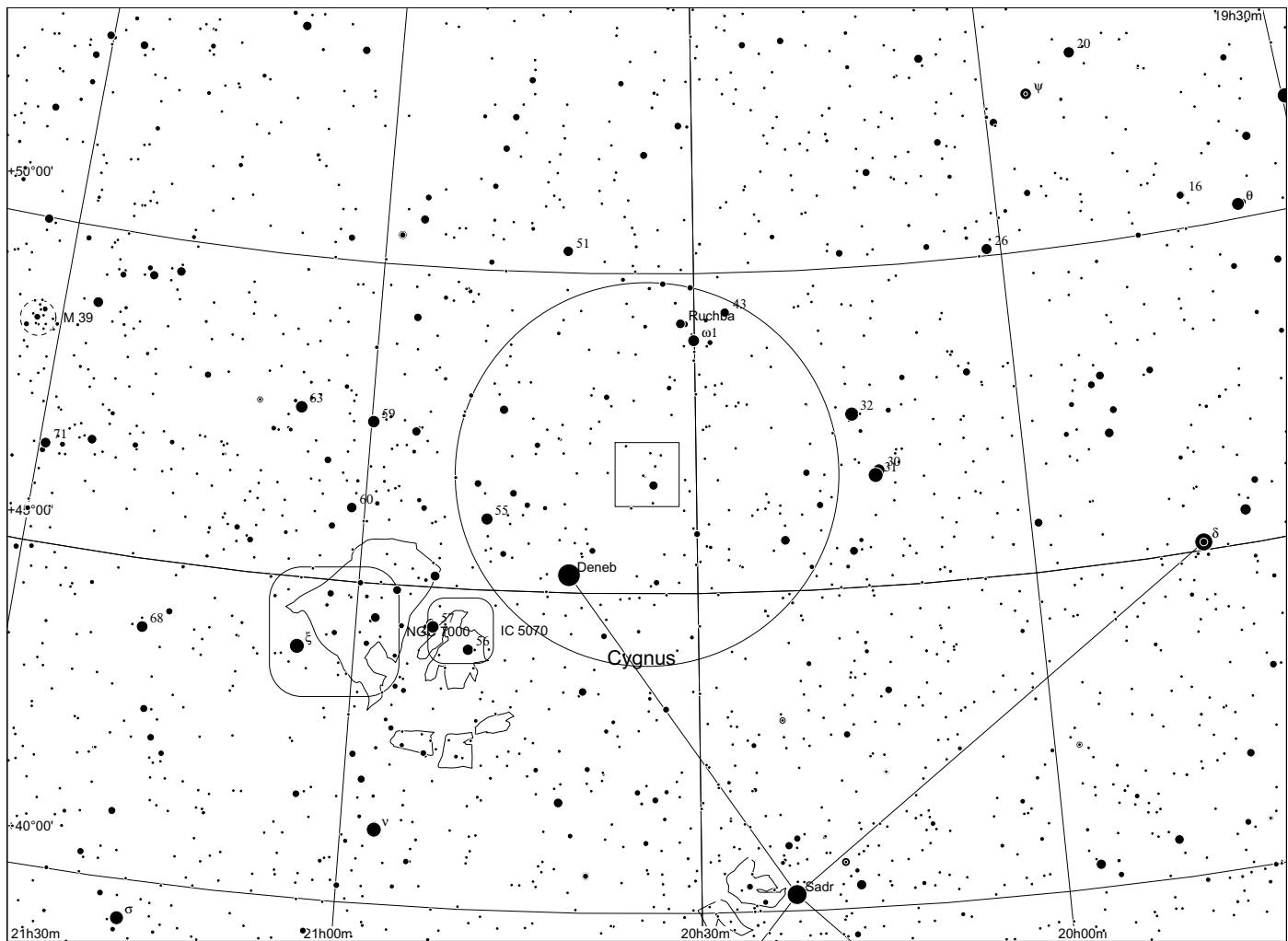


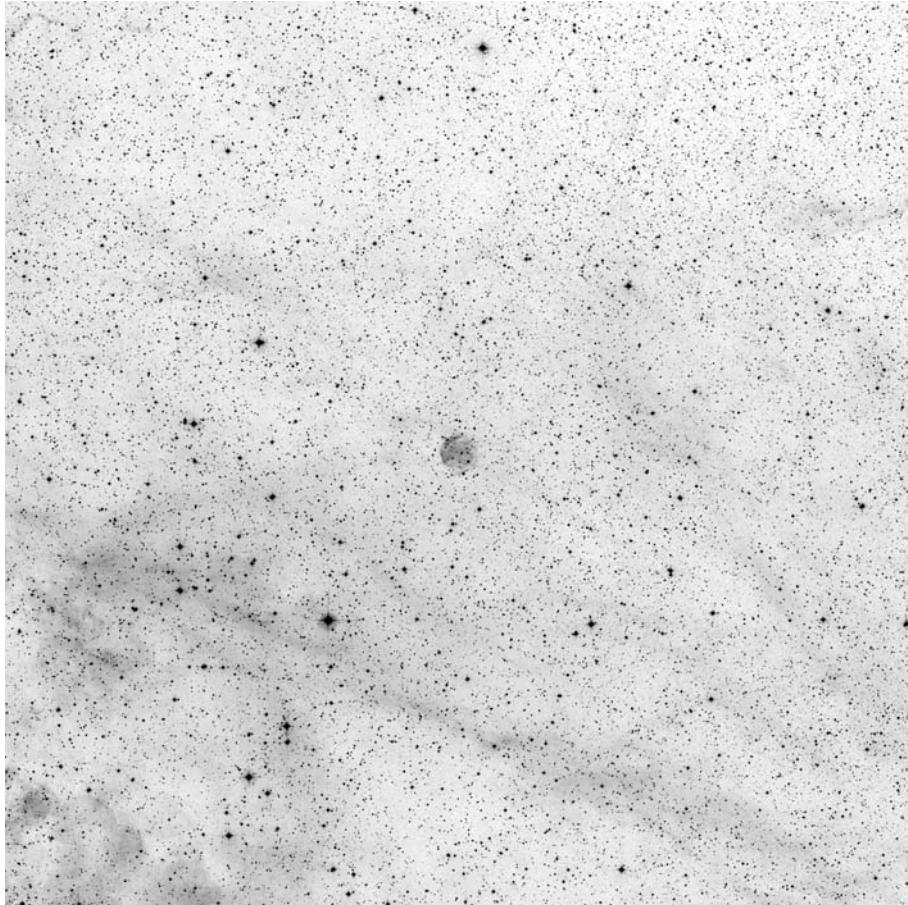
	other name	RA	dec	dia. '	F	S	B
Sh 2-115		20 34 33.0	+46 52 40	50	3	2	2

Distance: 2300 pc, Size: 33.5 pc, Source: 1981A&A...100...28F

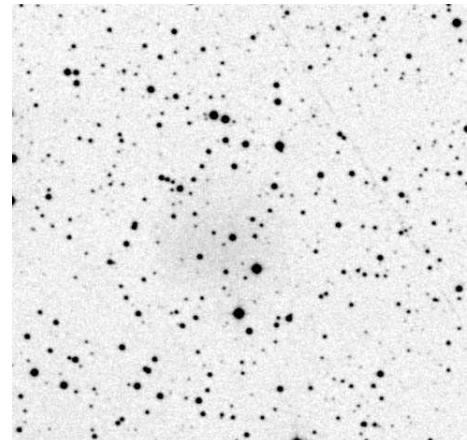
In the same direction as the radio source W71, this nebula is ionised by the O6 star LS III +46 12 which is part of the star cluster Berkeley 90 embedded in the nebula. The cloud surrounding Berkeley 90 (part of which is visible as Sh 2-115) contains 4400 solar masses of gas and dust and is about 30 pc long.

Observing notes:

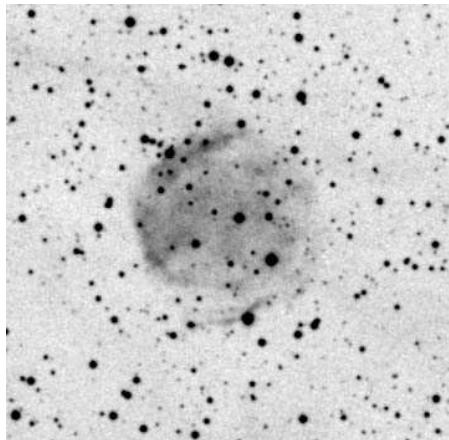




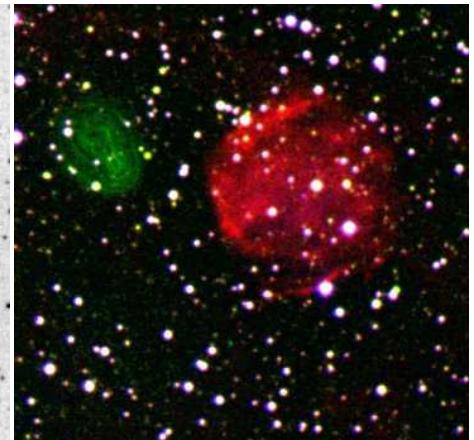
**Sh 2 - 116
in Cygnus**



POSS blue



POSS red

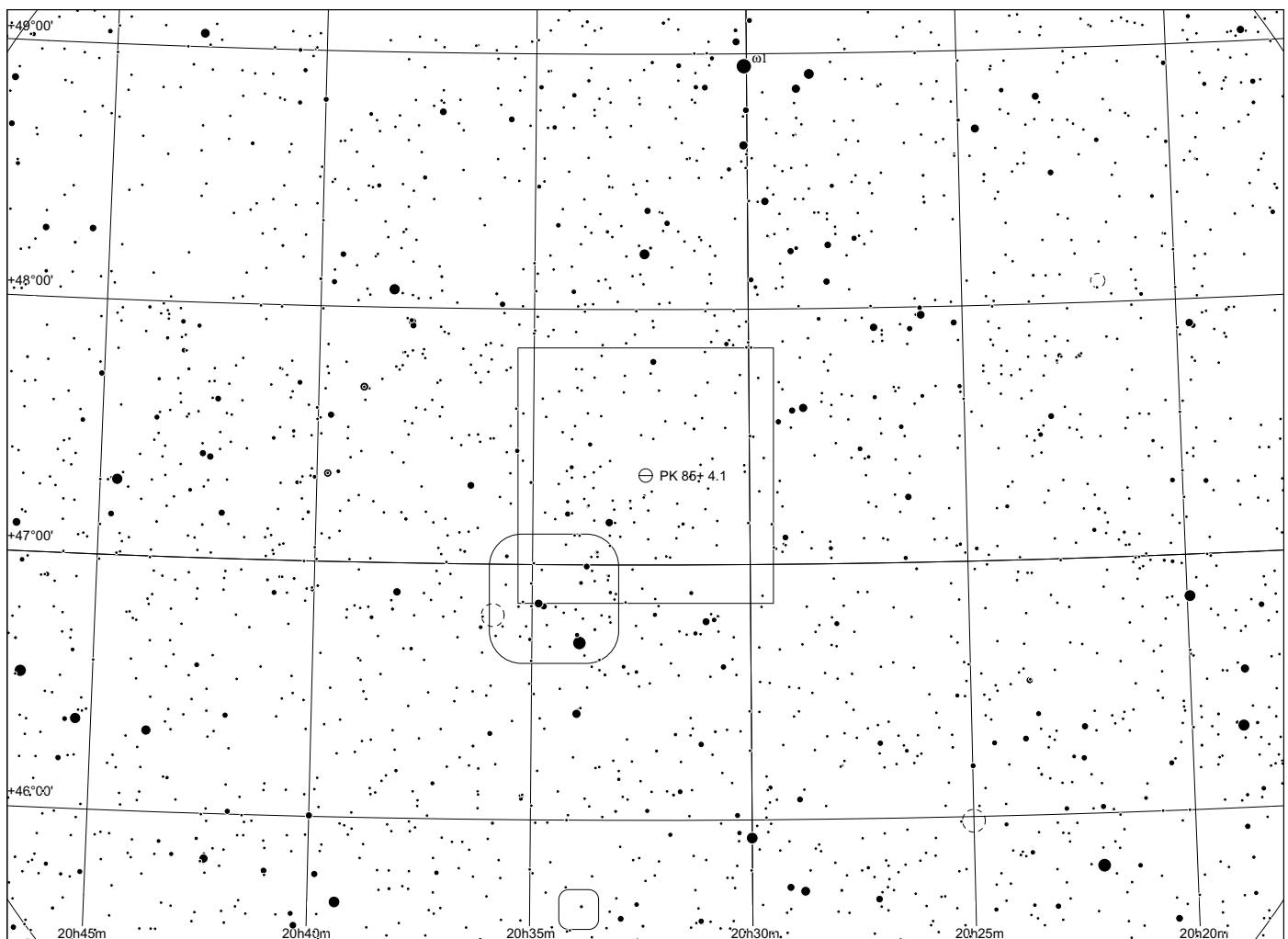
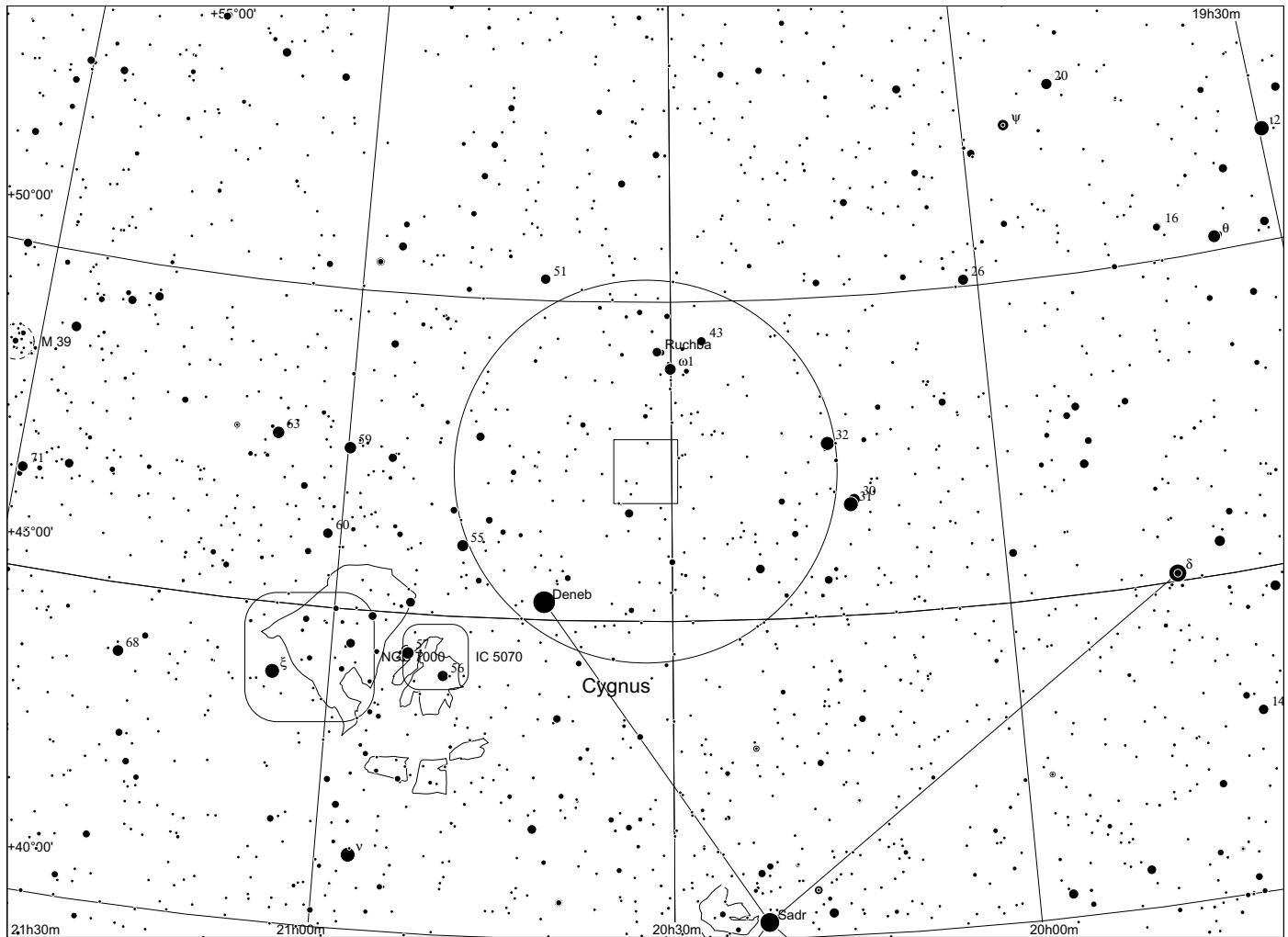


composite

	other name	RA	dec	dia. '	F	S	B
Sh 2-116	Abell 71	20 32 18.6	+47 21 25	2	1	2	2

Often described as the planetary nebula Abell 71, but a 1991 study concluded that this object is actually an HII region. The green glow next to it is probably a fault in the infrared photographic plate.

Observing notes:





Sh 2 - 117
in Cygnus

narrowband

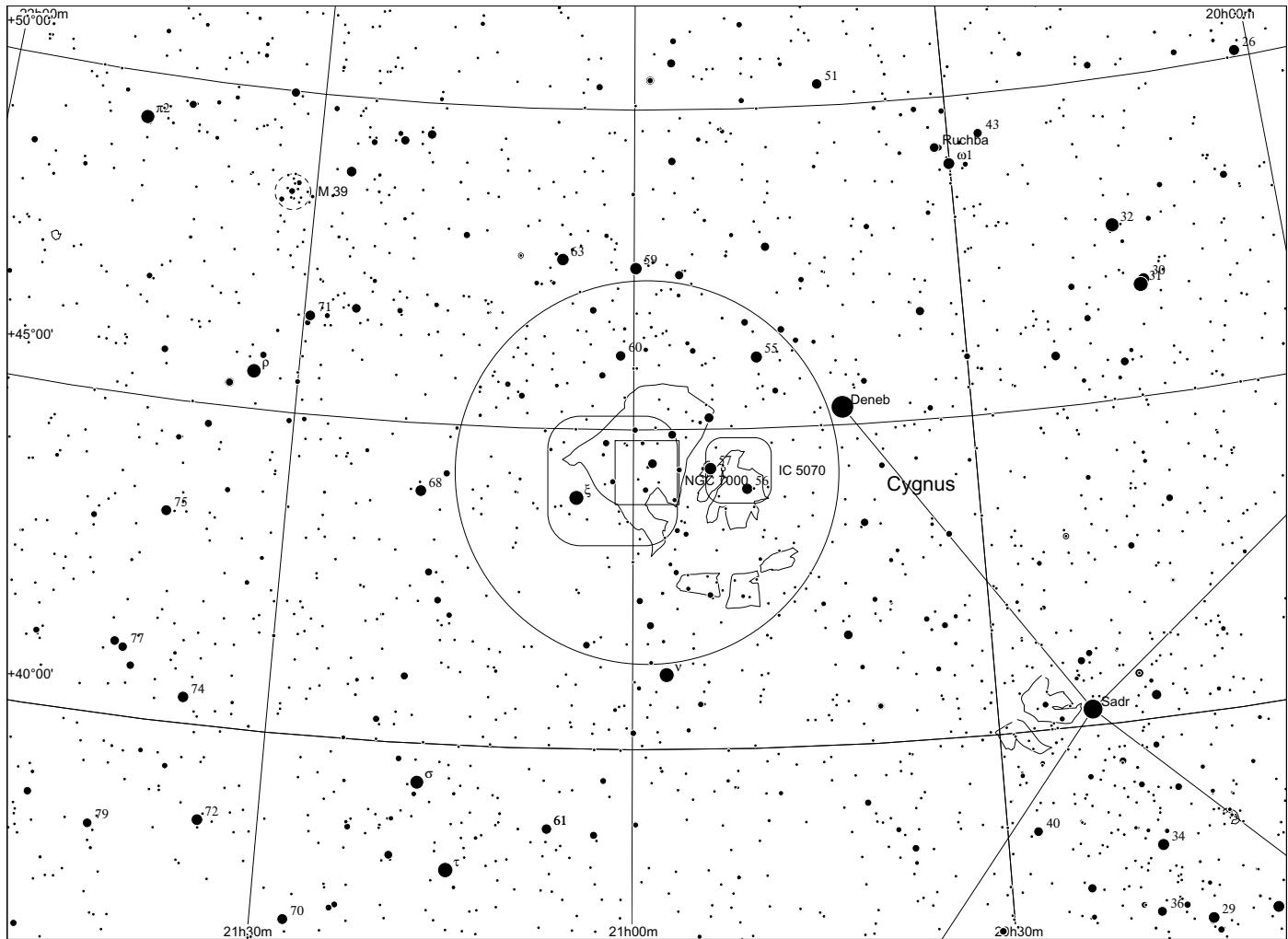
Dean Salman

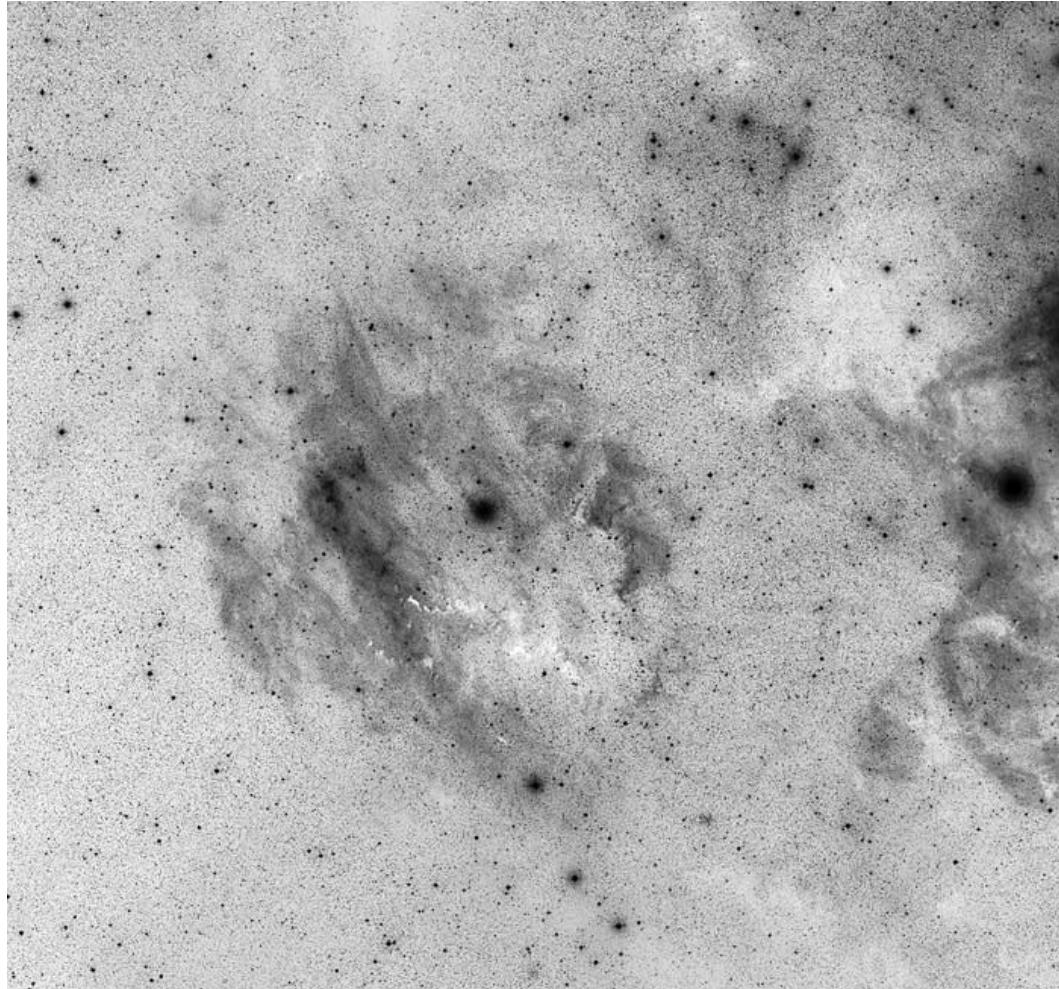
	other name	RA	dec	dia.	F	S	B
Sh 2-117	NGC7000 North American N.	20 58 46.3	+44 19 19	240	3	3	2

Distance: 800 pc, Size: 55.9 pc, Source: 1982ApJS...49..183B

This is the North American and Pelican nebula, which is visible through a gap in the Rift system of dusty giant molecular clouds that separates the Gould Belt from the Cygnus complex. Sh 2-117 appears to be ionised by the heavily obscured O5V star 2MASS J205551.25+435224.6.

Observing notes:





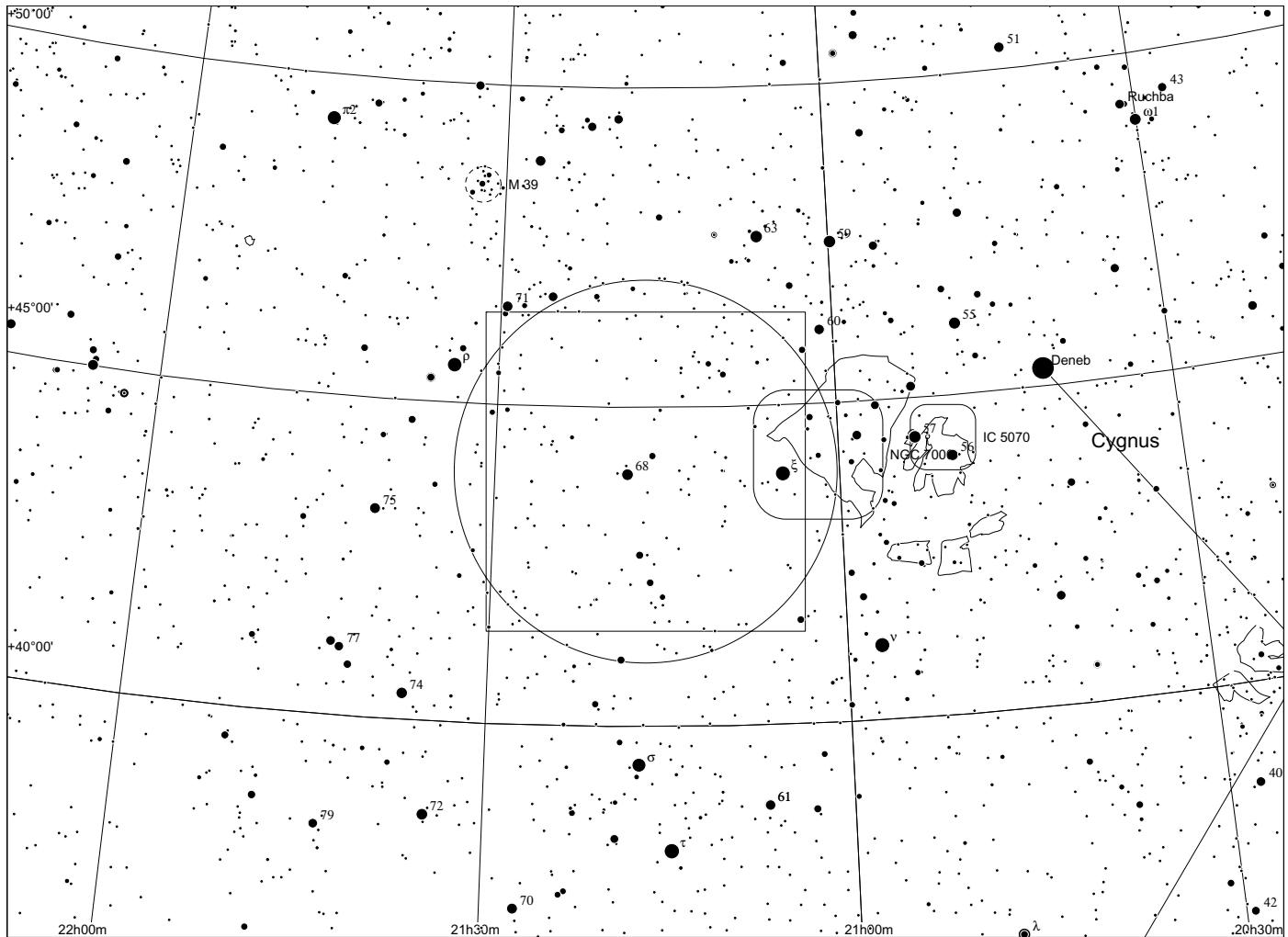
Sh 2 - 119
in Cygnus

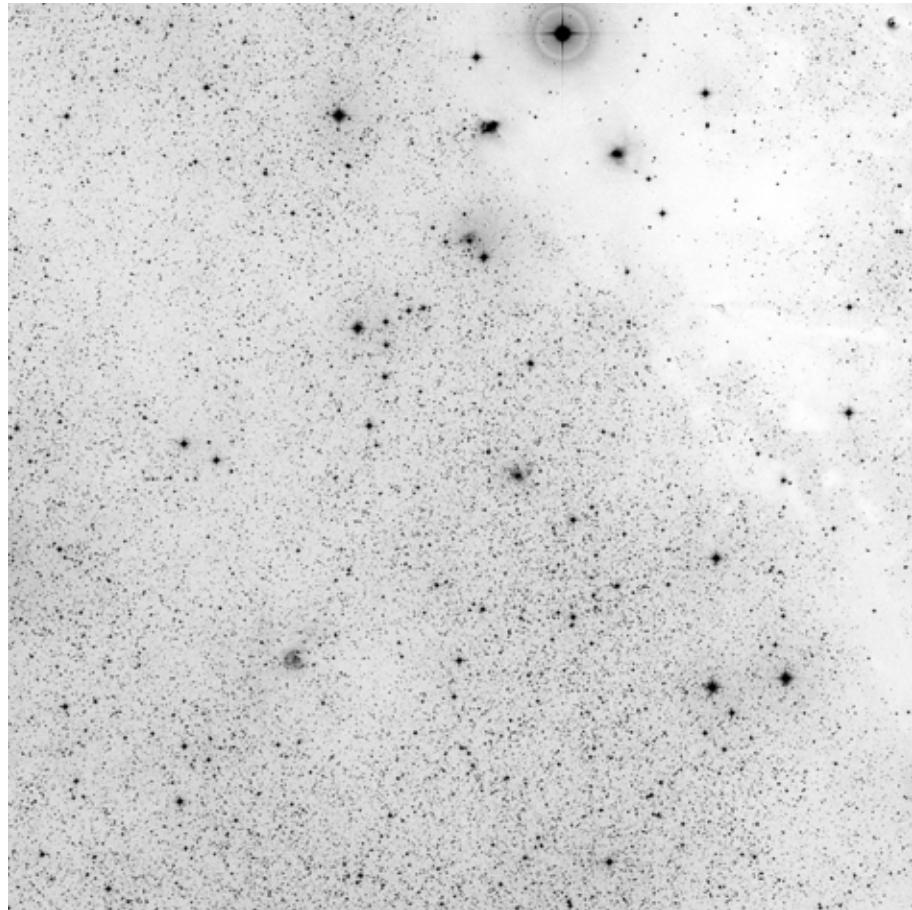
	other name	RA	dec	dia.	'	F	S	B
Sh 2-119		21 18 25.0	+43 56 16	160	2	2	3	

Distance: 700 pc, Size: 32.6 pc, Source: 1982ApJS...49..183B

This nebula is near the North American nebula (Sh 2-117, NGC 7000) and appears to be ionised by the O 7.5 III runaway star 68 Cygni (HD 203064), which was likely blasted out of the Cepheus OB2 association about 5.2 million years ago.

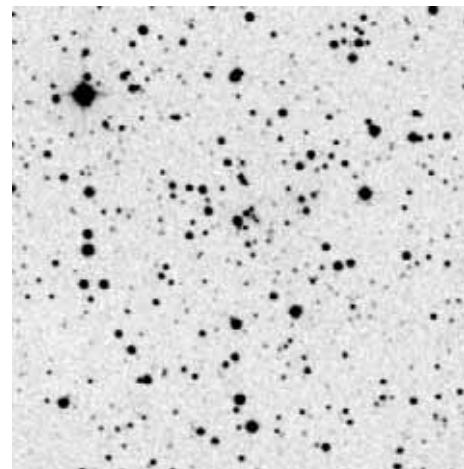
Observing notes:



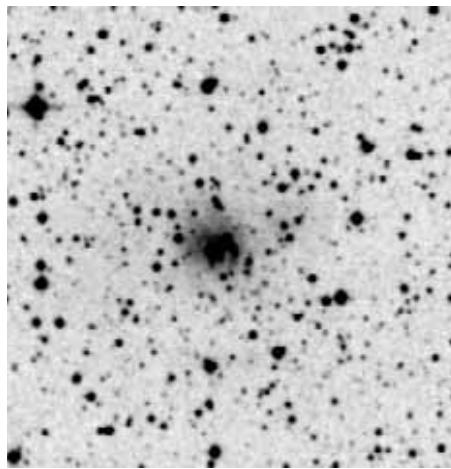


**Sh 2 - 120
in Cygnus**

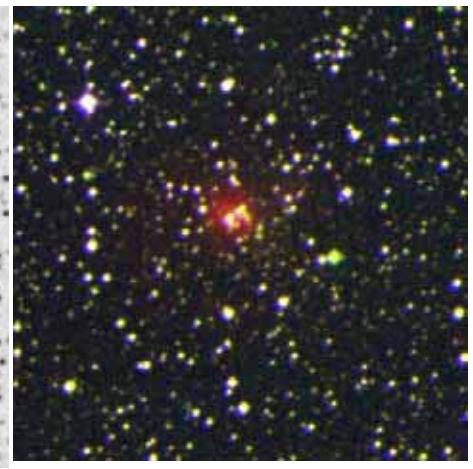
60x60, red



POSS blue



POSS red

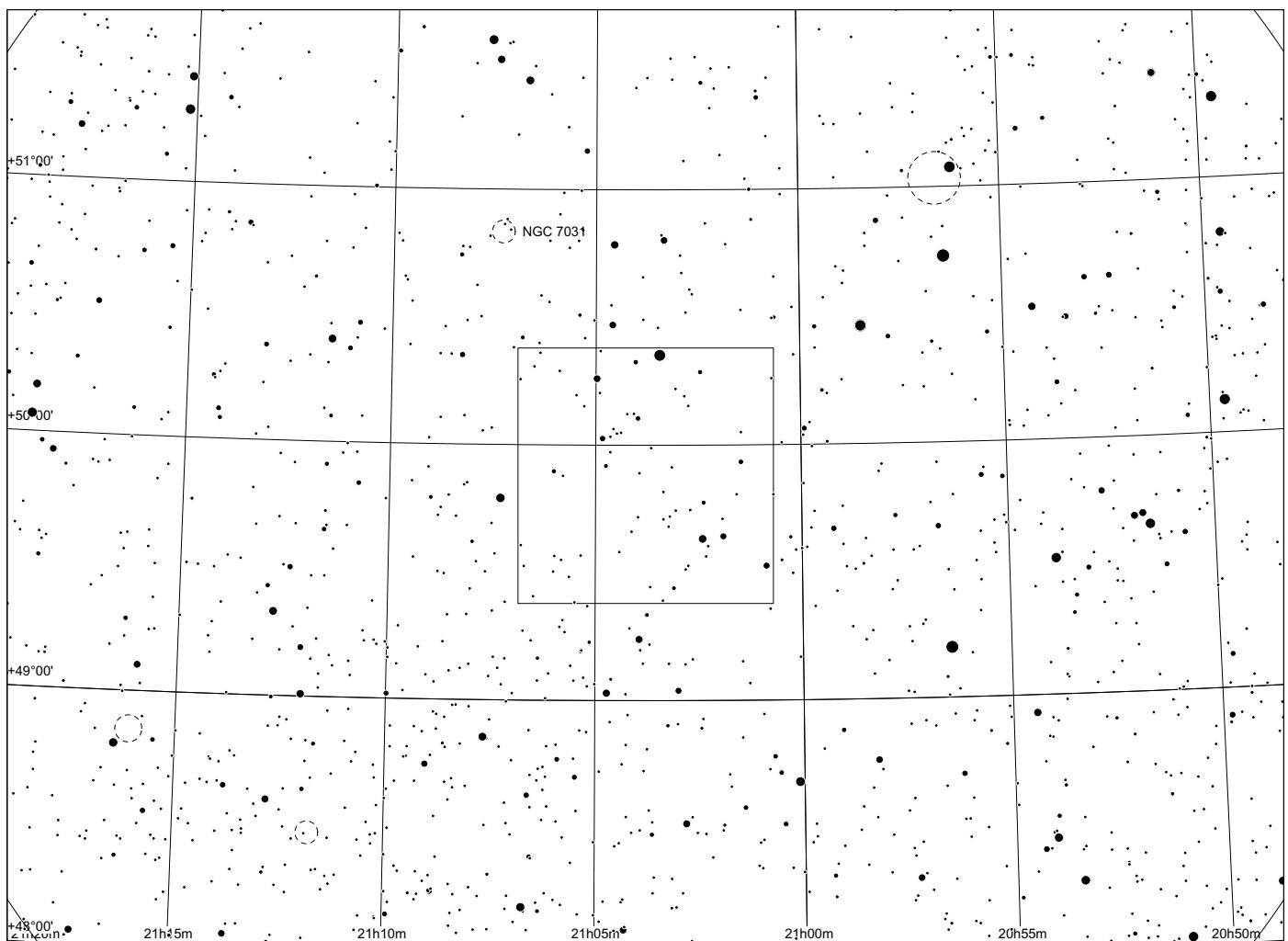
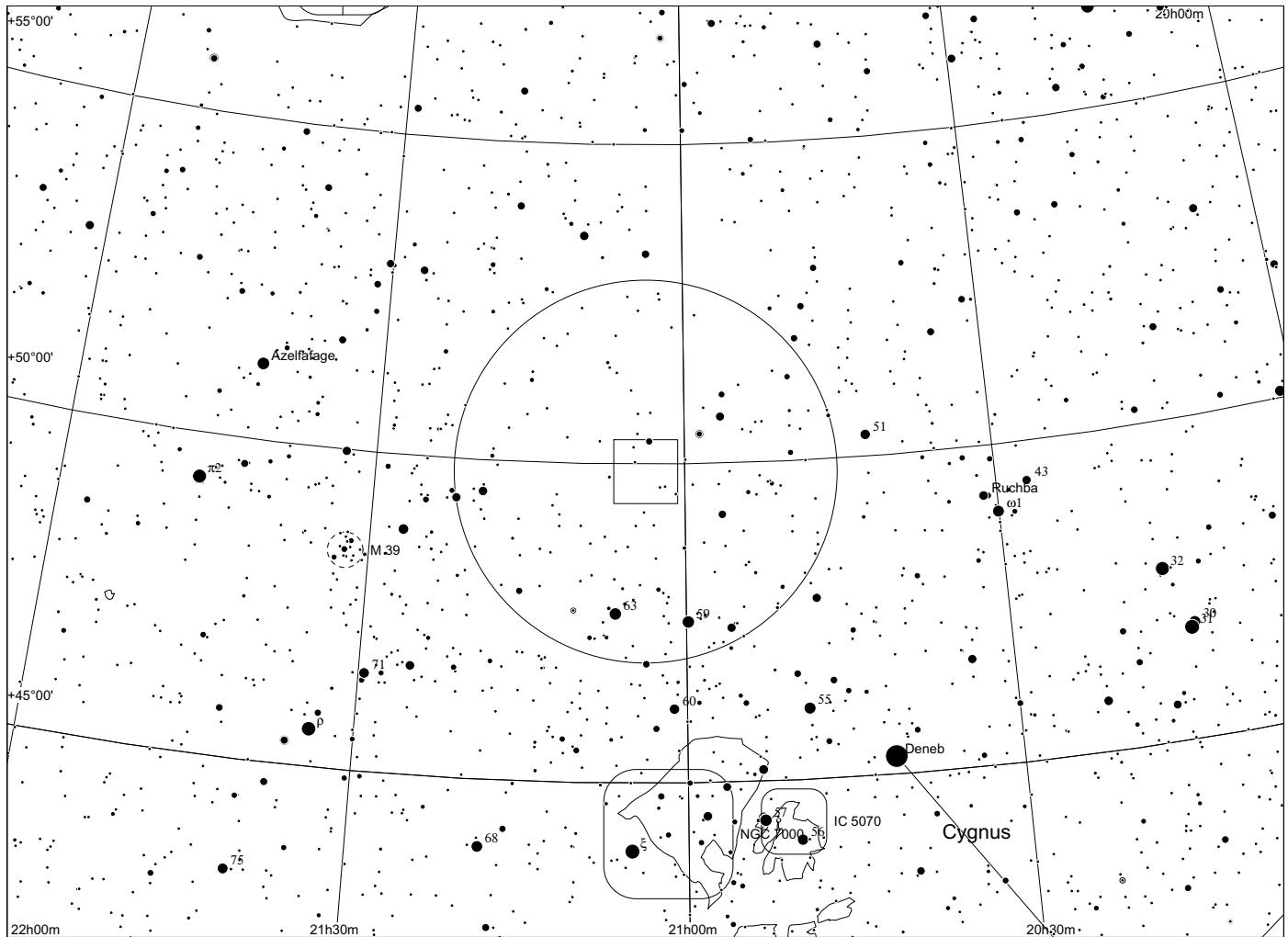


composite

	other name	RA	dec	dia. '	F	S	B
Sh 2-120		21 03 46.6	+49 52 51	1	1	1	1

Distance: 6300 pc, Size: 1.8 pc, Source: 2003A&A...397..133R

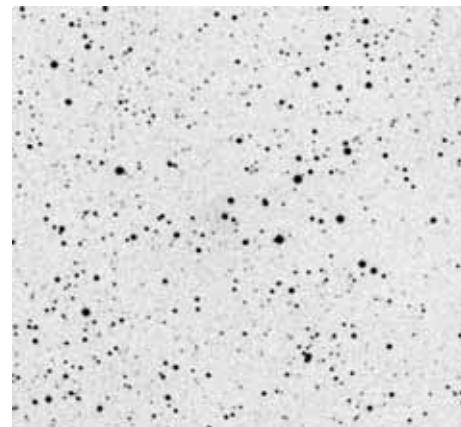
Observing notes:



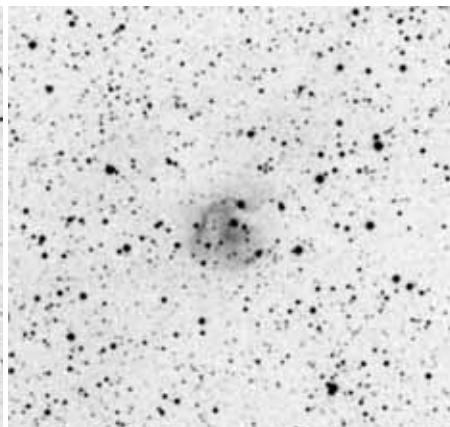
Sh 2 - 121
in Cygnus



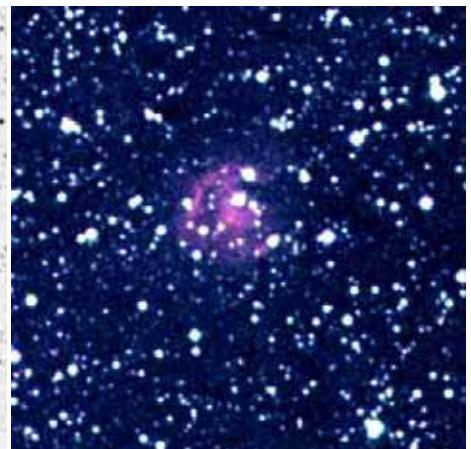
60x60, red



POSS blue



POSS red

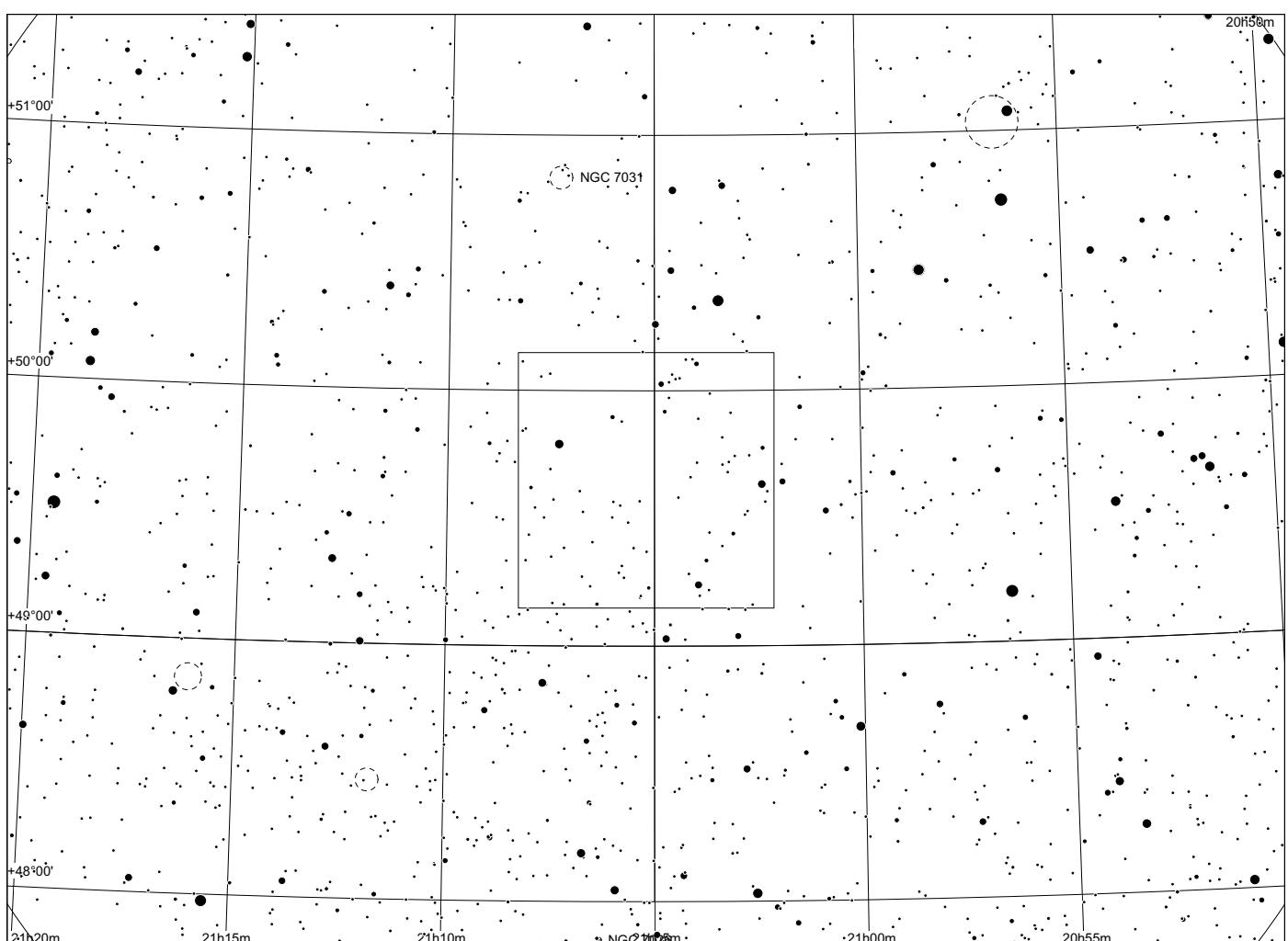
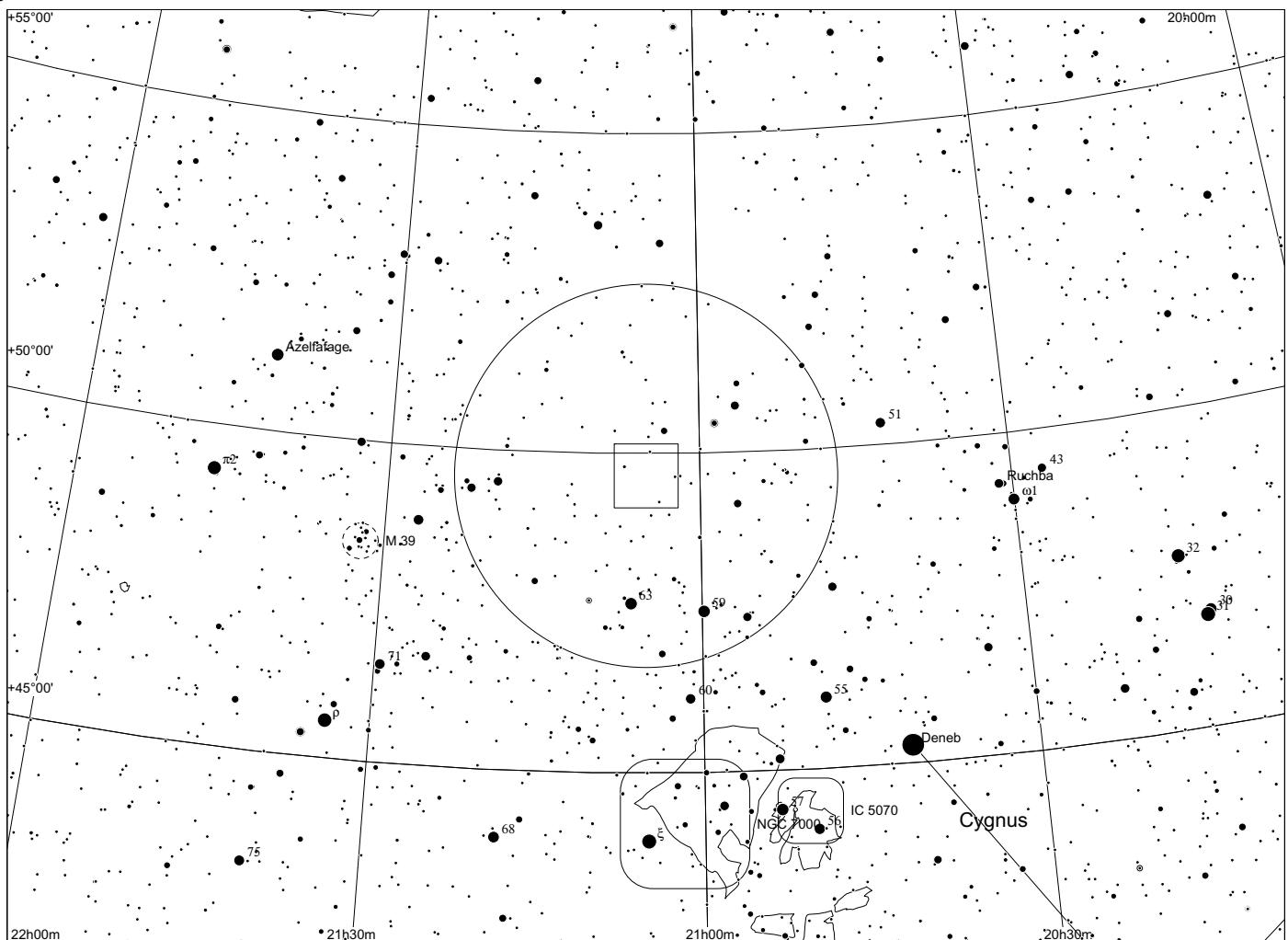


composite

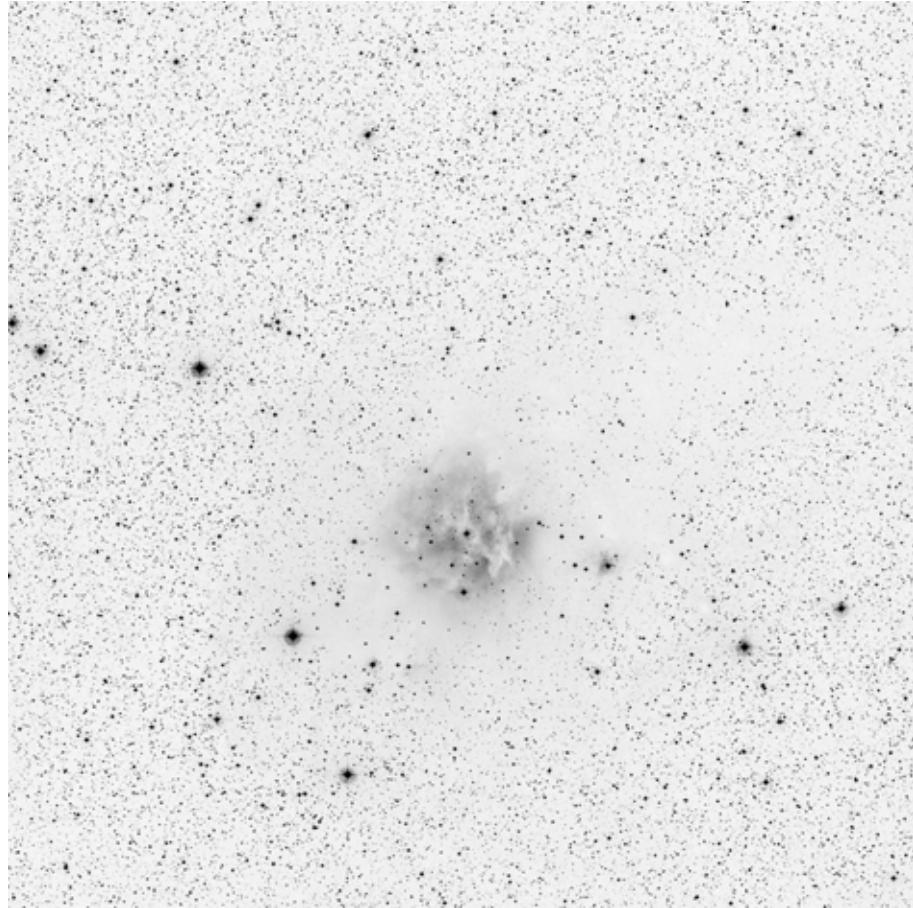
	other name	RA	dec	dia. '	F	S	B
Sh 2-121		21 05 12.4	+49 38 59	1	3	2	1

Distance: 6300 pc, Size: 1.8 pc, Source: 2003A&A...397..133R

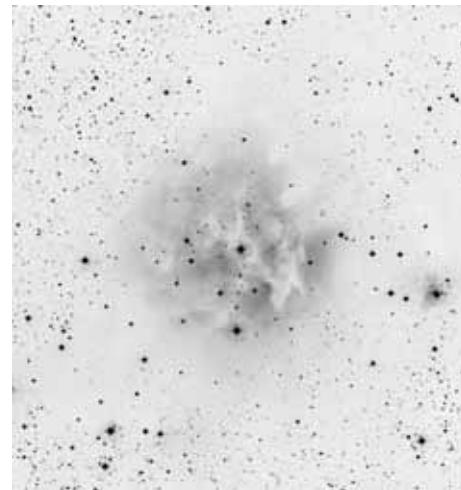
Observing notes:



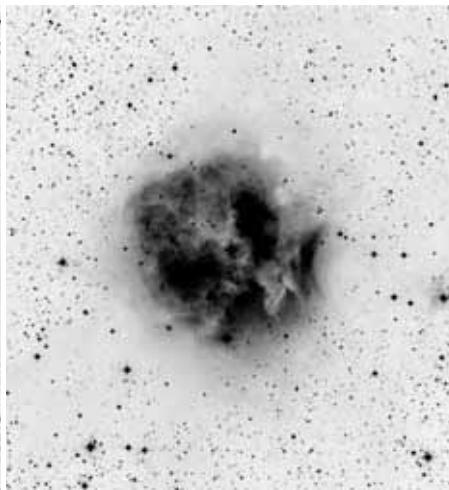
Sh 2 - 125
in Cygnus



60x60, blue



POSS blue



POSS red



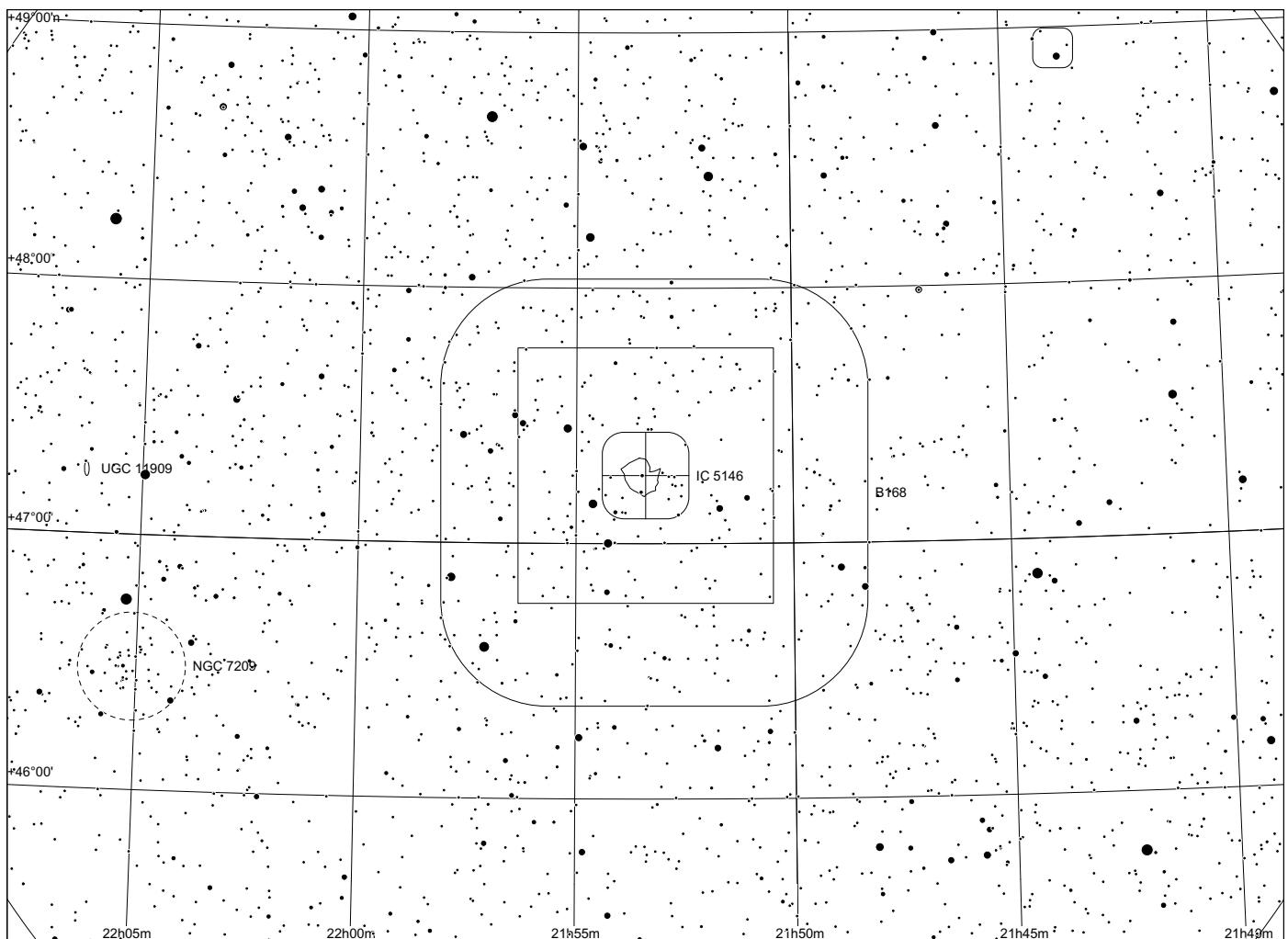
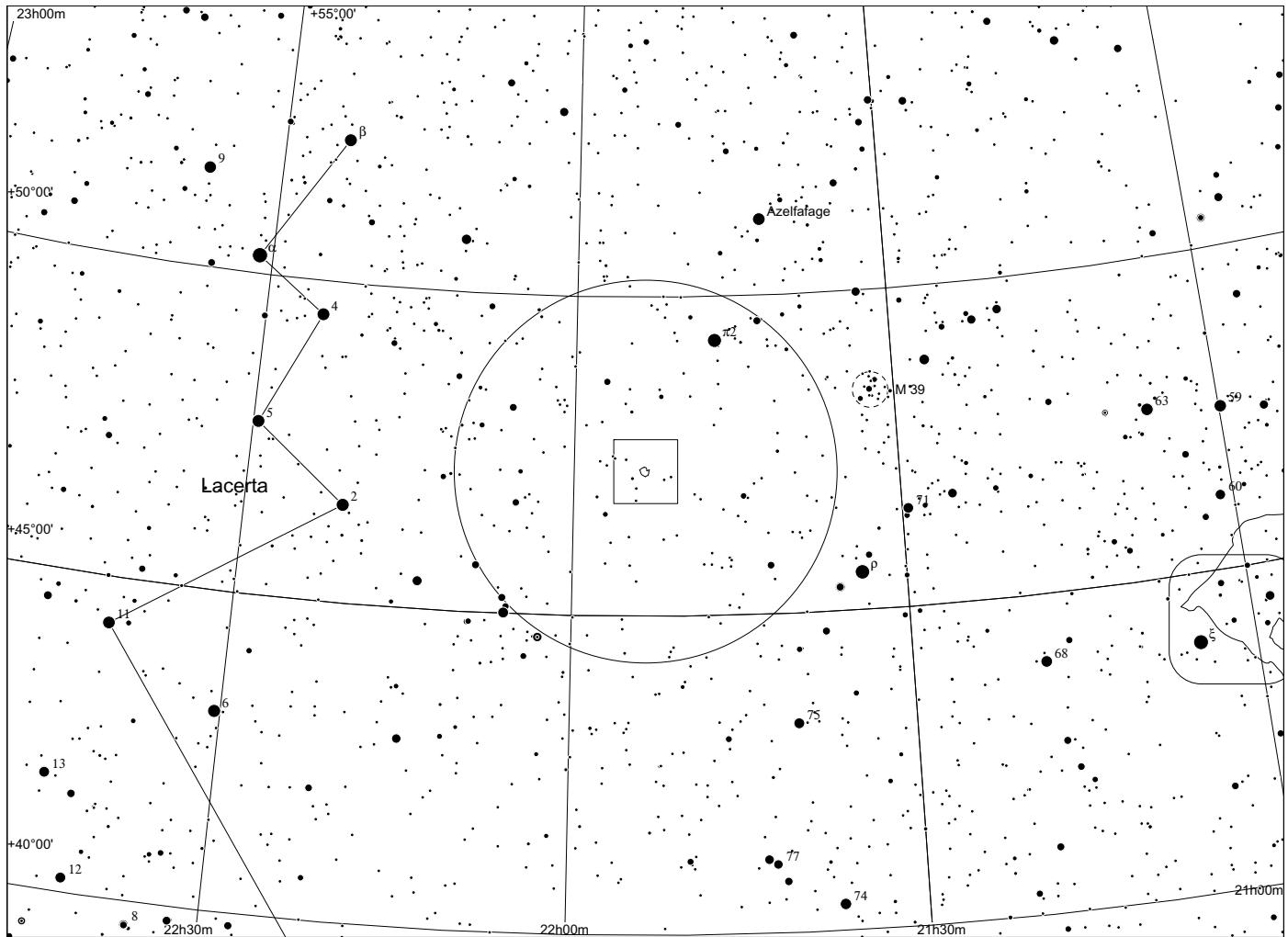
composite

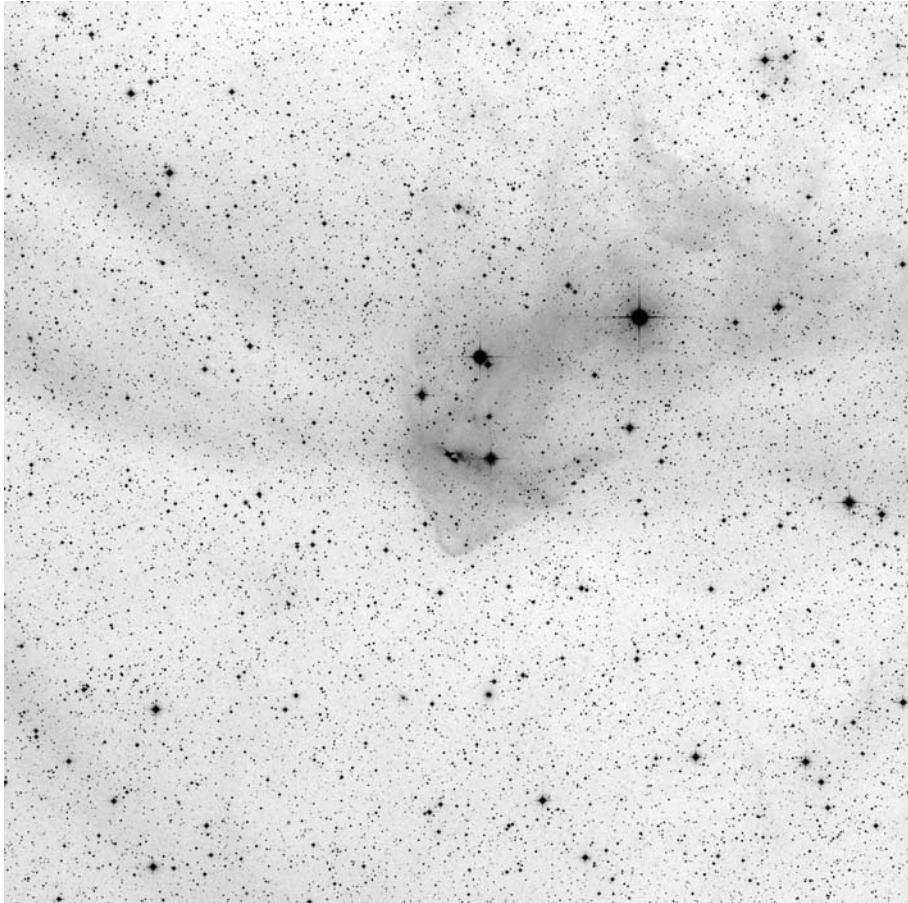
	other name	RA	dec	dia. '	F	S	B
Sh 2-125	IC 5146 = Cocoon Nebula	21 53 32.7	+47 16 18	9	2	2	3

Distance: 1000 pc, Size: 2.6 pc, Source: 1982ApJS...49..183B

The Cocoon nebula is associated with the star cluster IC 5146.

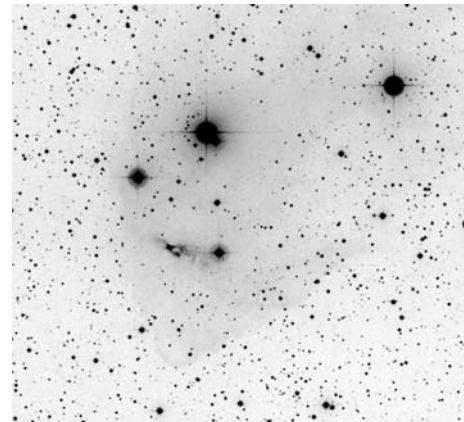
Observing notes:



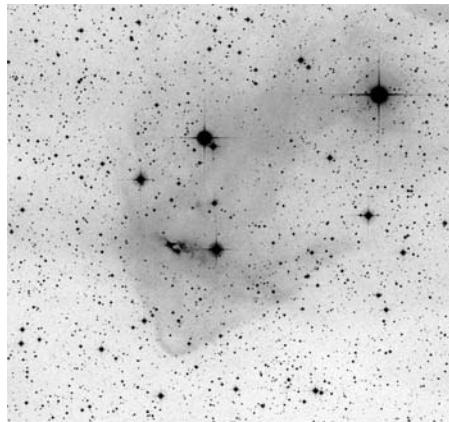


Sh 2 - 126
in Lacerta

60x60, red



POSS blue



POSS red



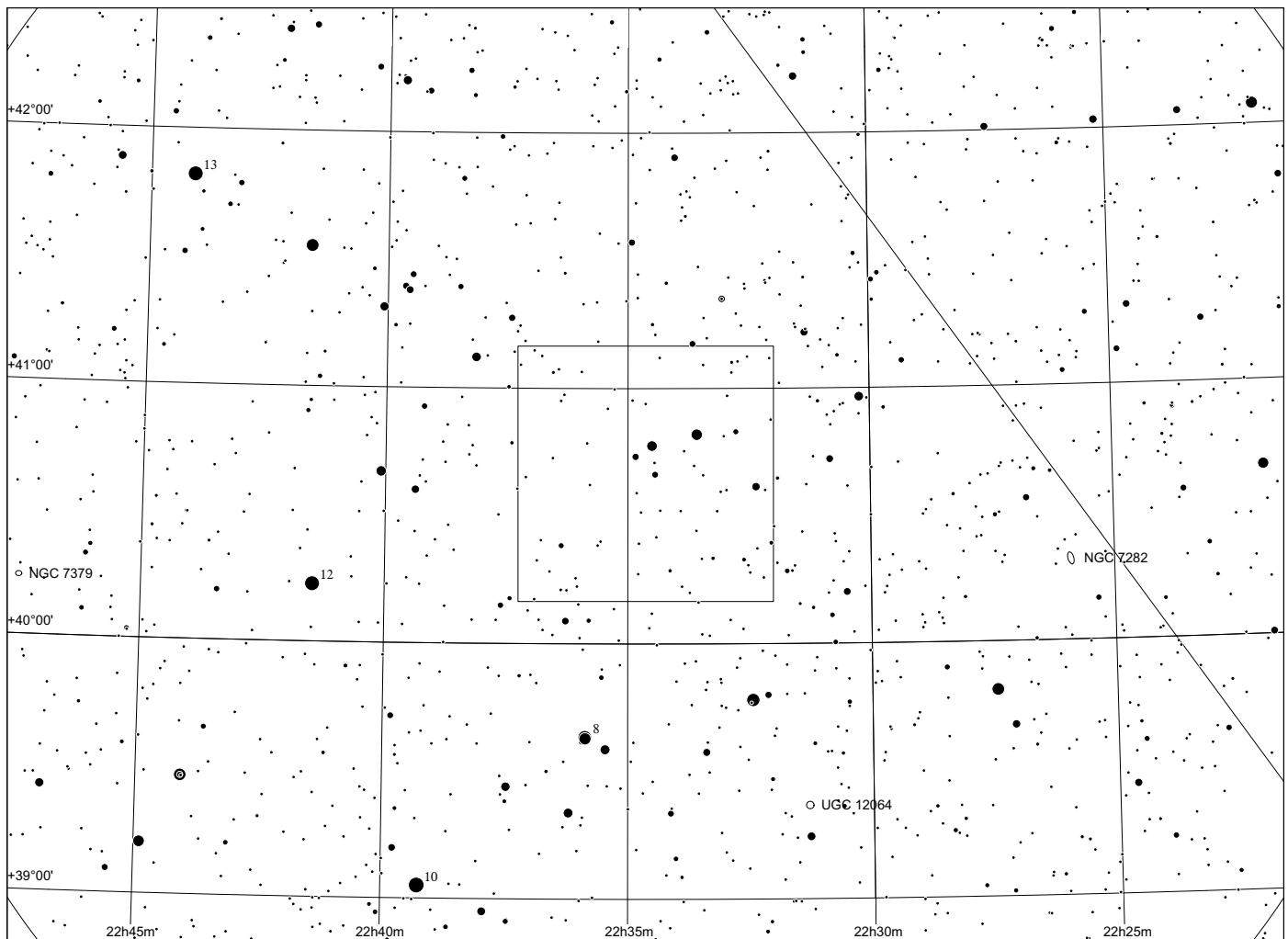
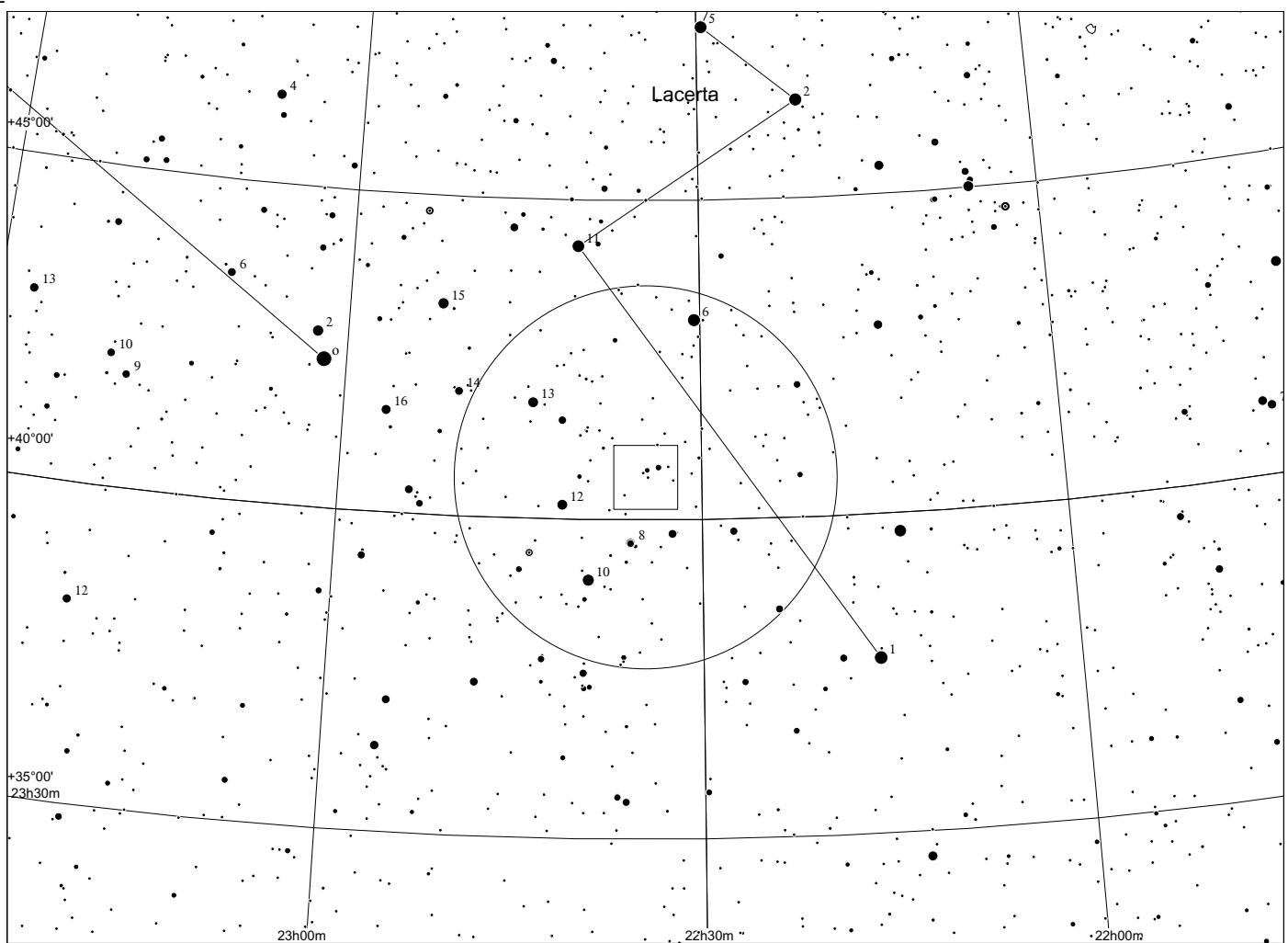
composite

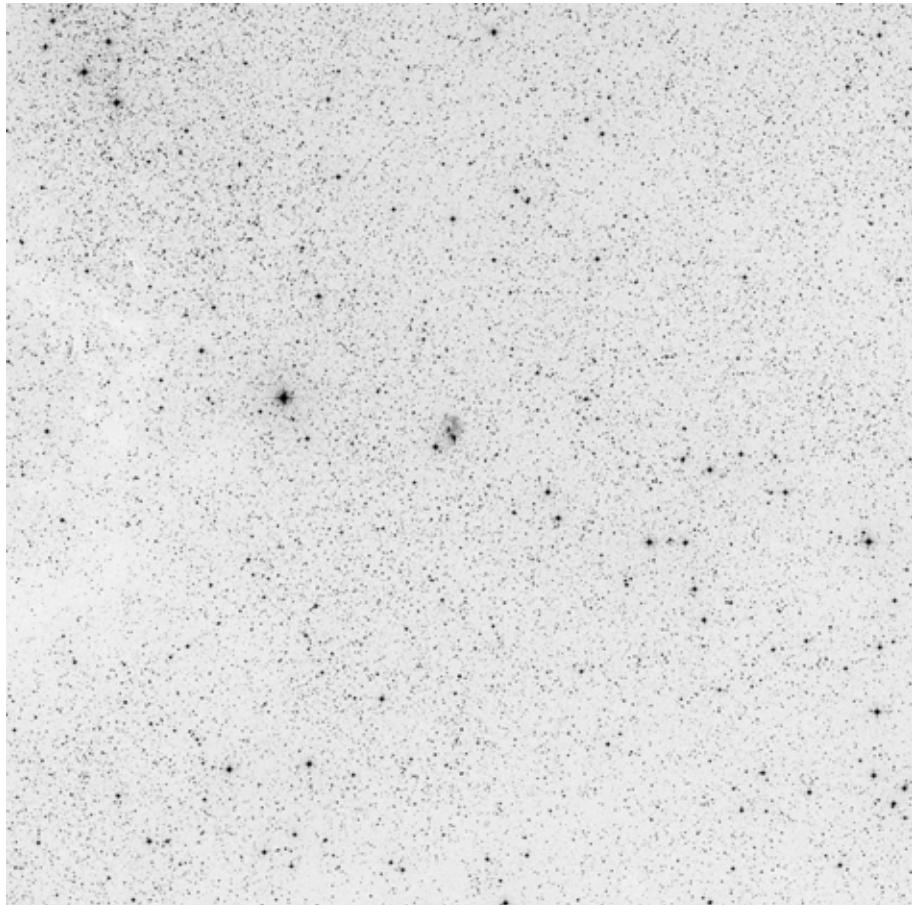
	other name	RA	dec	dia. '	F	S	B
Sh 2-126		22 34 38	+40 40 00	160	3	2	2

Distance: 600 pc, Size: 27.9 pc, Source: 1982ApJS...49..183B

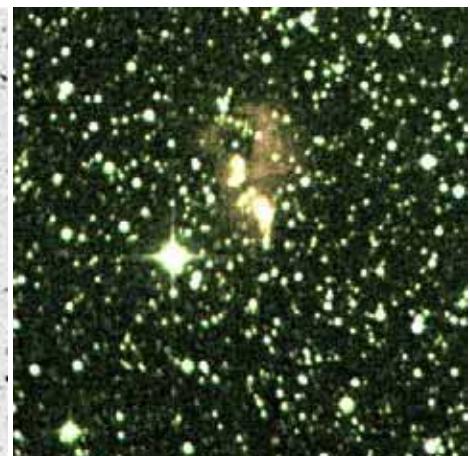
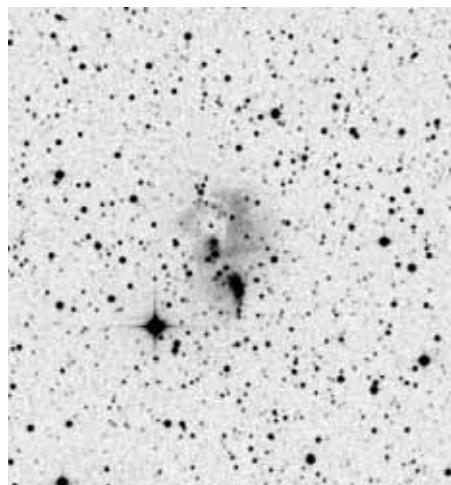
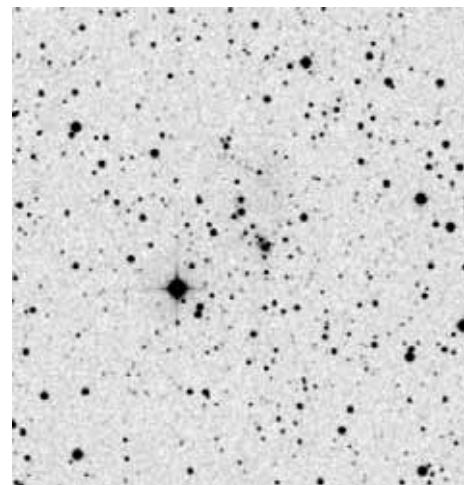
This HII region is also called the 10 Lacertae complex.

Observing notes:





**Sh 2 - 127
in Cygnus**



POSS blue

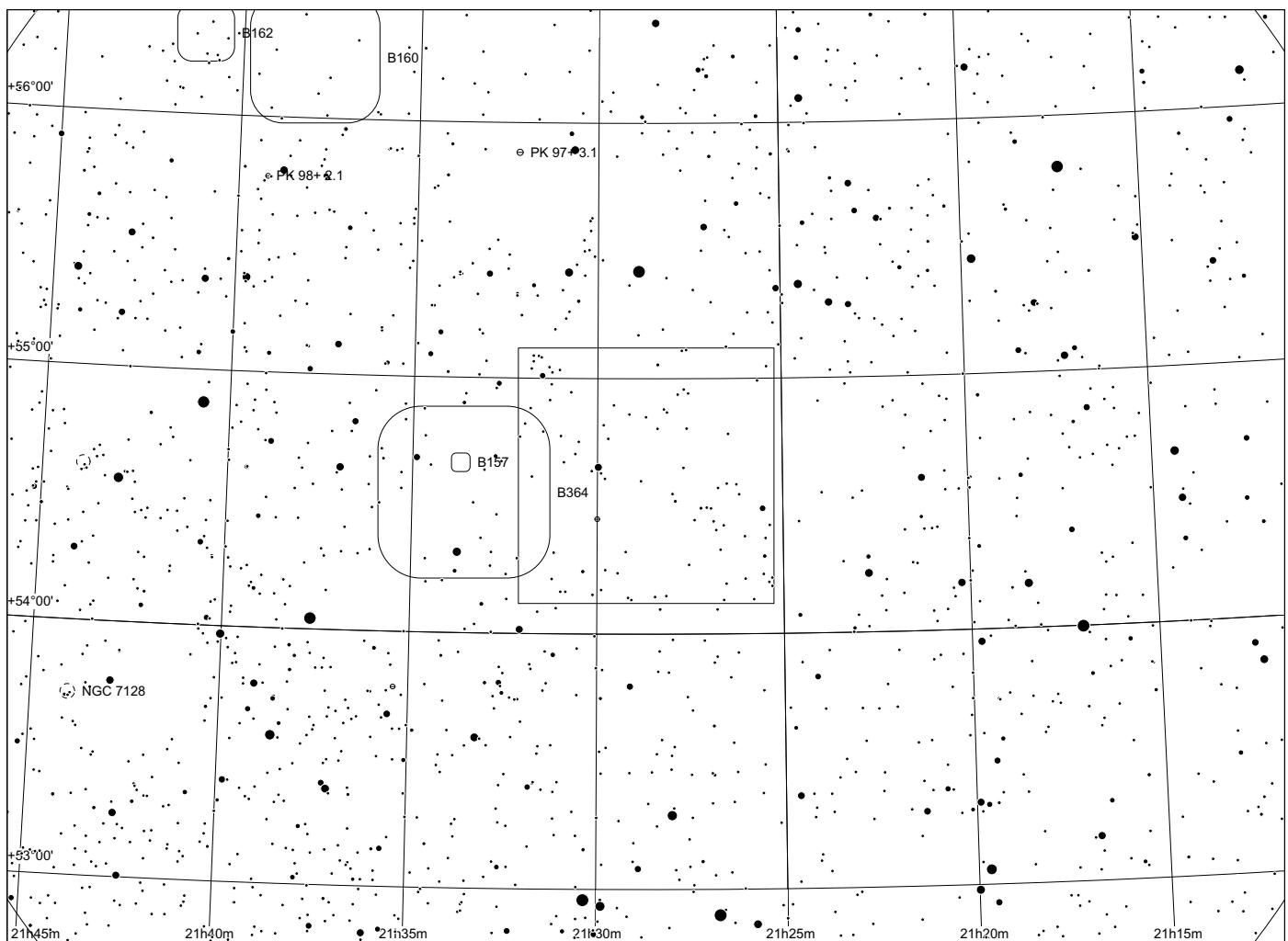
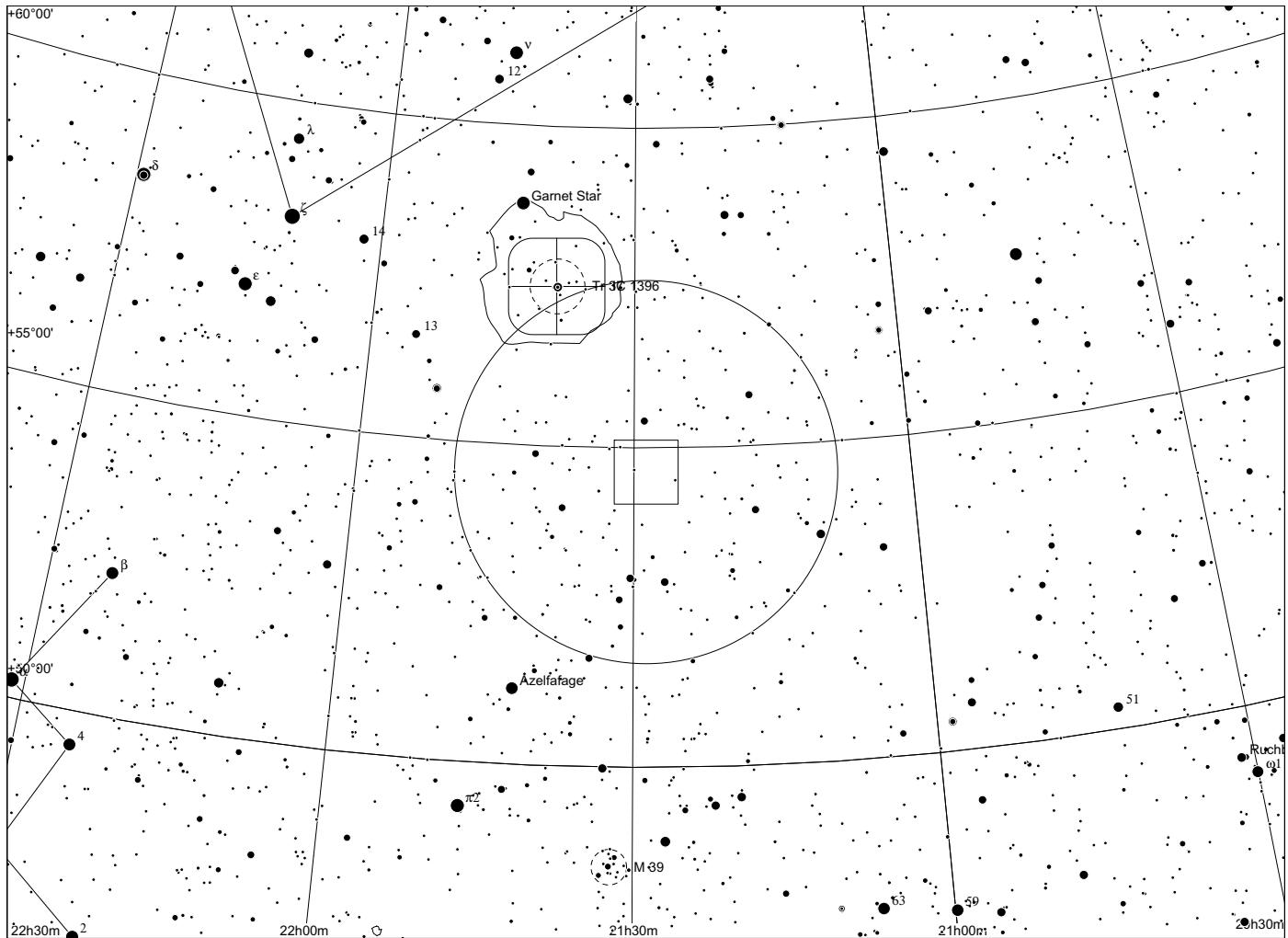
POSS red

composite

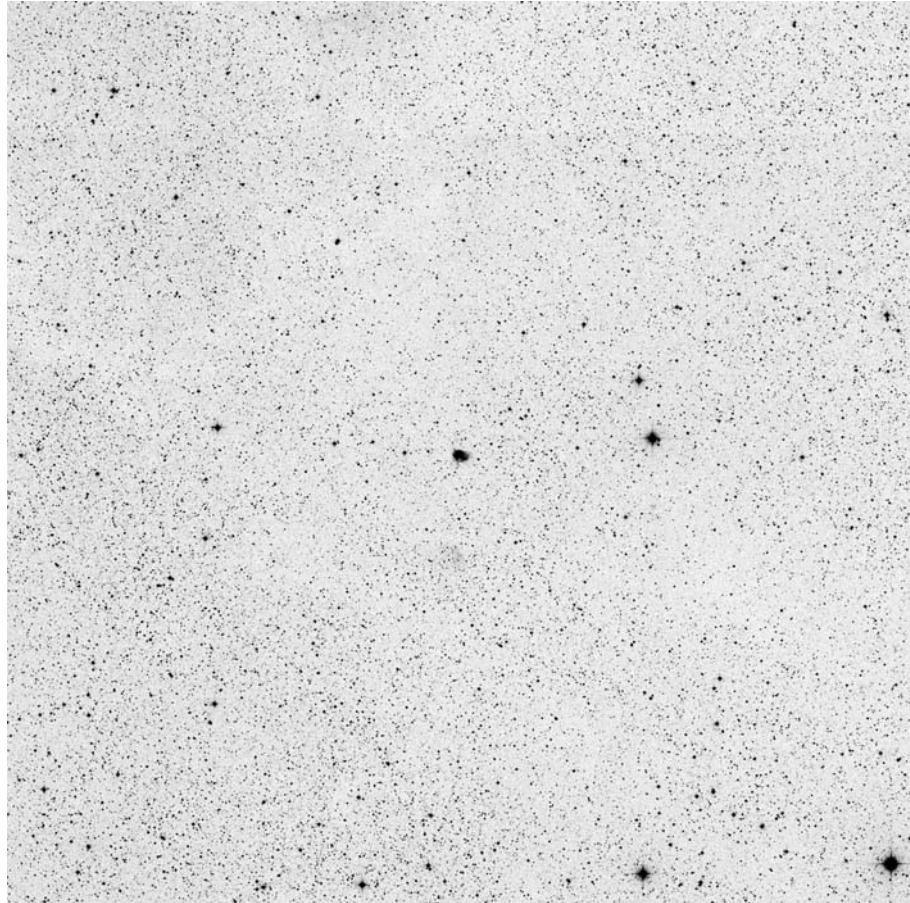
	other name	RA	dec	dia. '	F	S	B
Sh 2-127		21 28 41.0	+54 37 14	2	3	2	2

Distance: 9700 pc, Size: 5.6 pc, Source: 2003A&A...397..133R

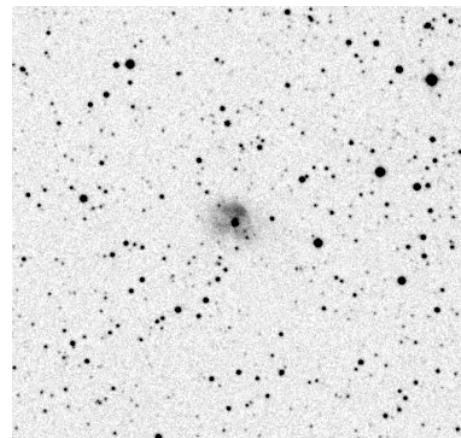
Observing notes:



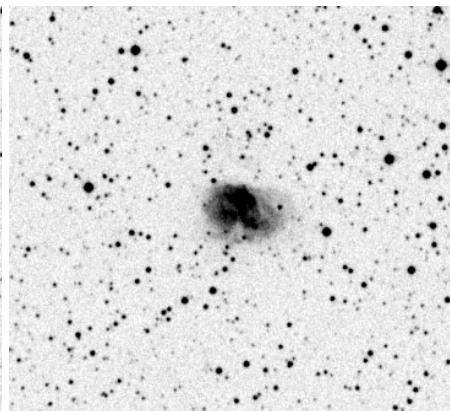
Sh 2 - 128
in Cepheus



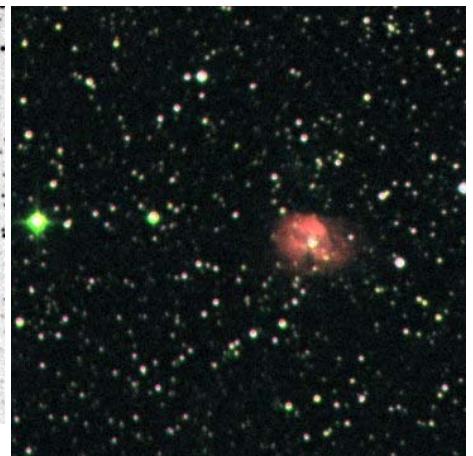
60x60, red



POSS blue



POSS red



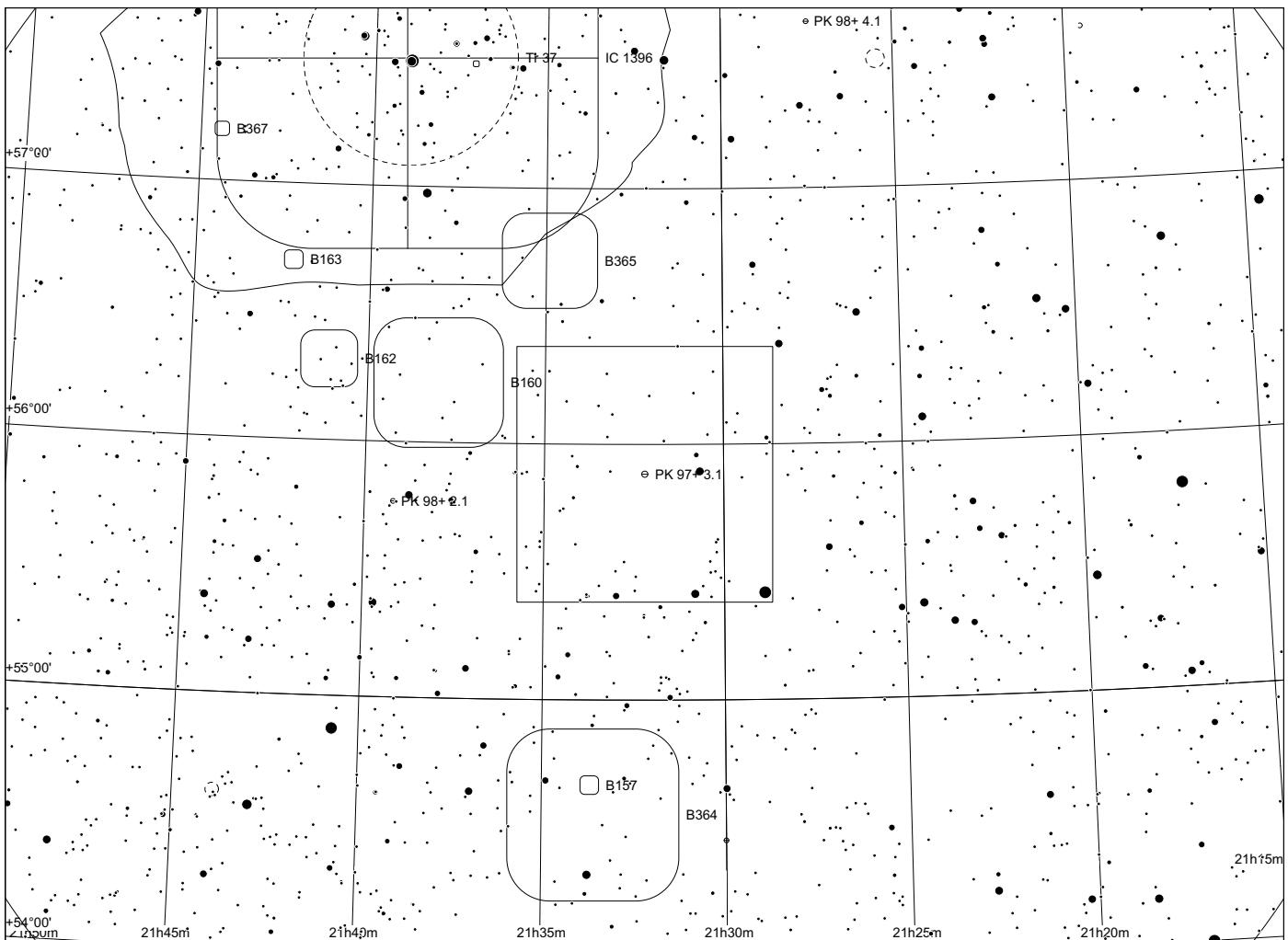
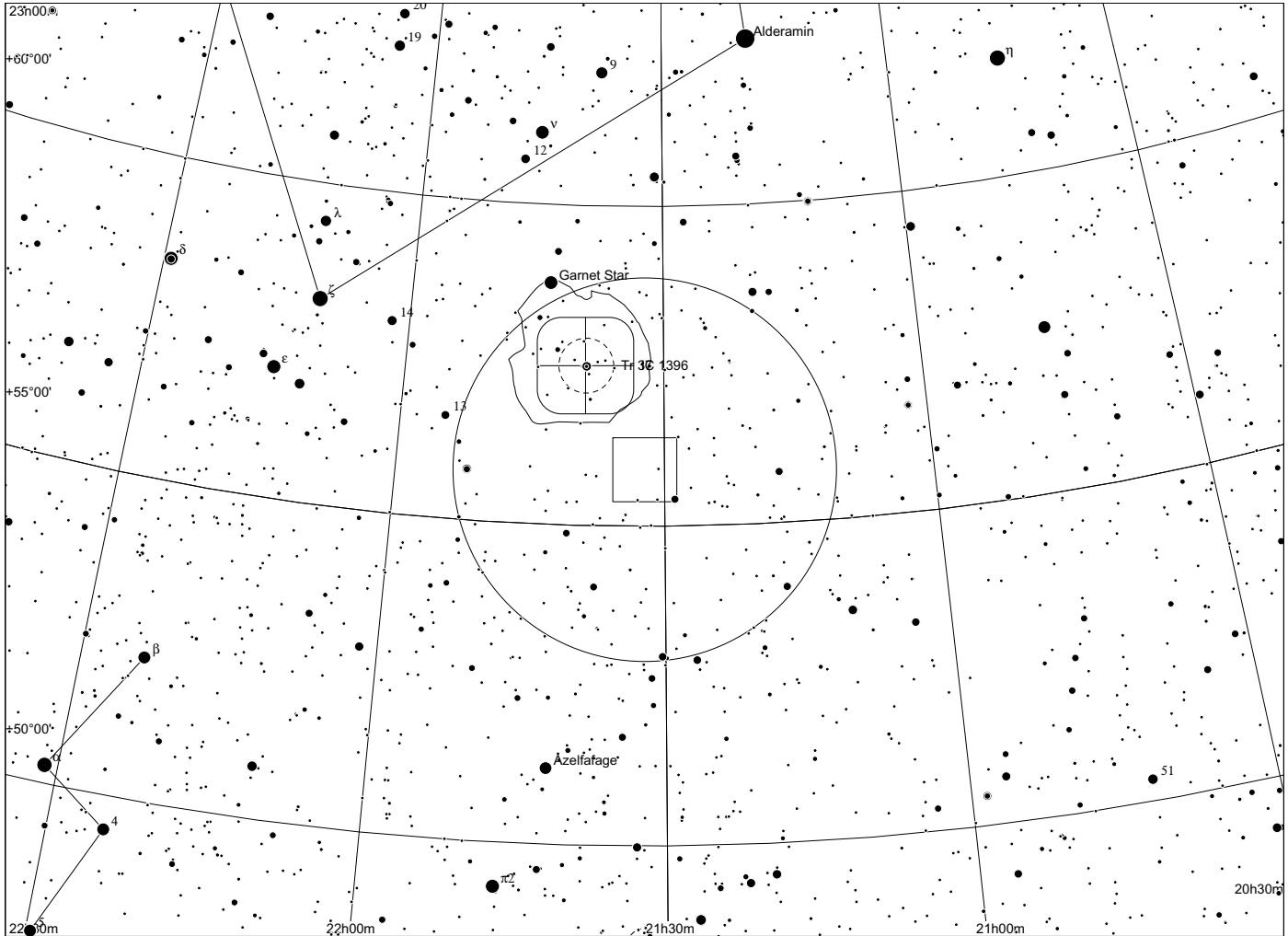
composite

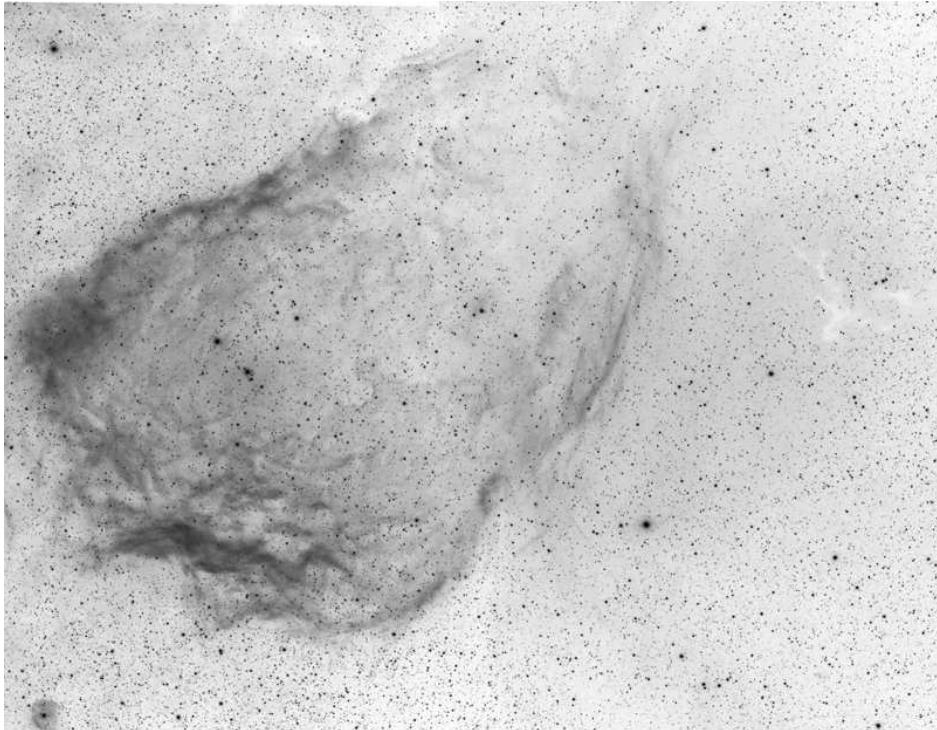
	other name	RA	dec	dia. '	F	S	B
Sh 2-128	Abell 77	21 32 08.4	+55 51 34	1	3	2	3

Distance: 9400 pc, Size: 2.7 pc, Source: 2003AJ....126.1861B

This region is actually located at a distance of 9.4 kpc, is about one million years old and is ionised by an O7 star.

Observing notes:





Sh 2 - 129
in Cepheus



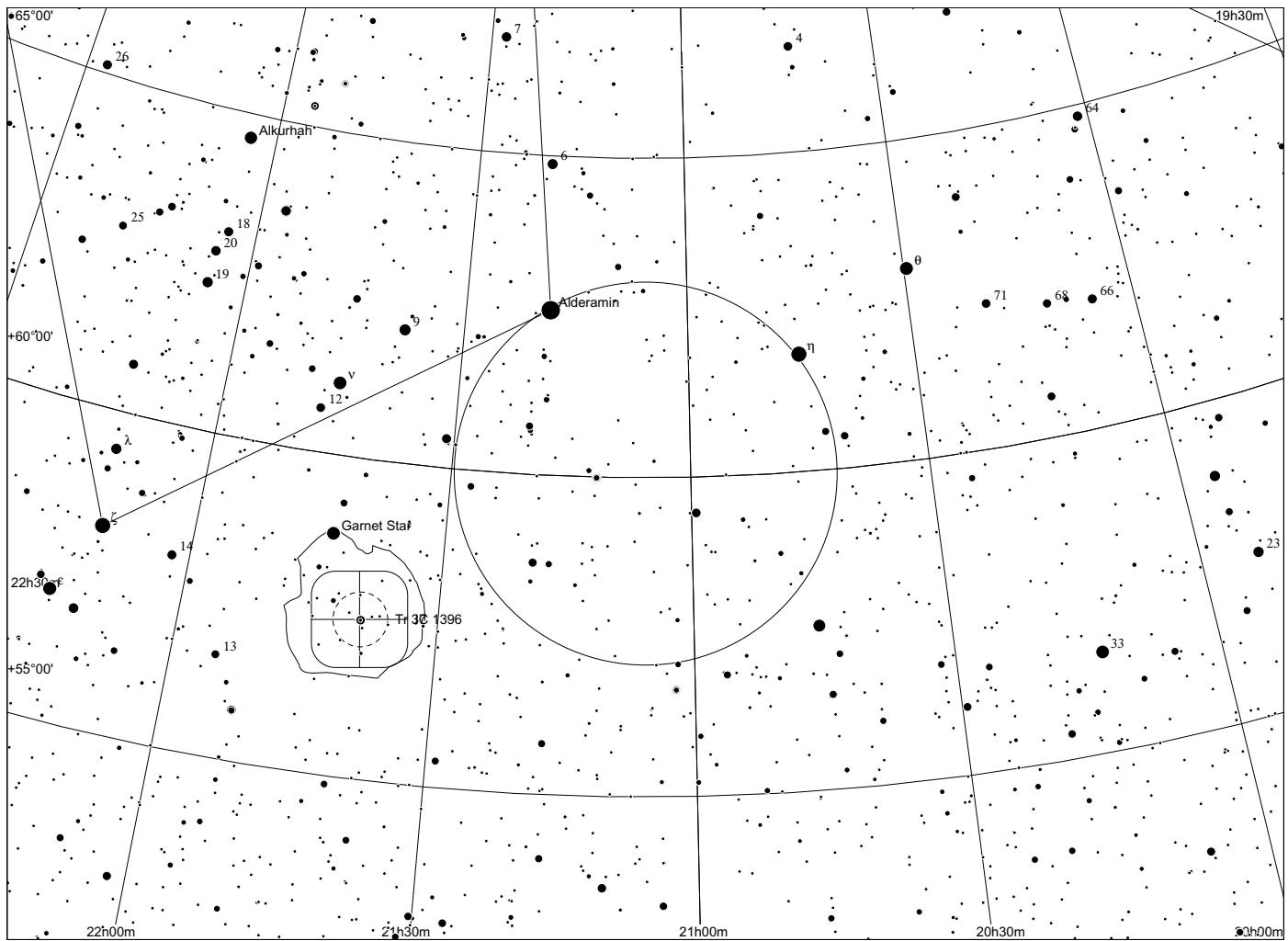
H alpha Dean Salman

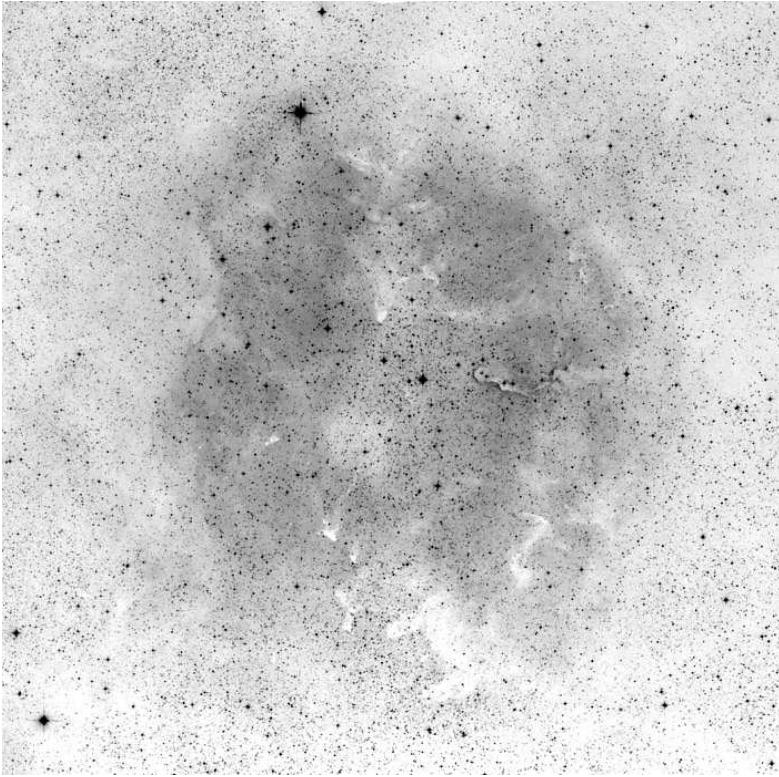
	other name	RA	dec	dia.	'	F	S	B
Sh 2-129		21 11 44.4	+59 57 40	140	3	2	2	

Distance: 400 pc, Size: 16.3 pc, Source: 1982ApJS...49..183B

Sometimes called the Flying Bat nebula.

Observing notes:



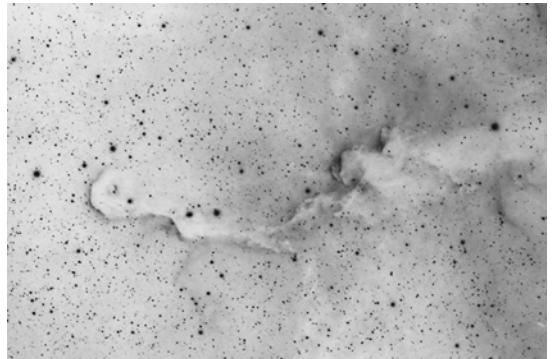


**Sh 2 - 131
in Cepheus**

60x60, red



narrow band Dean Salman



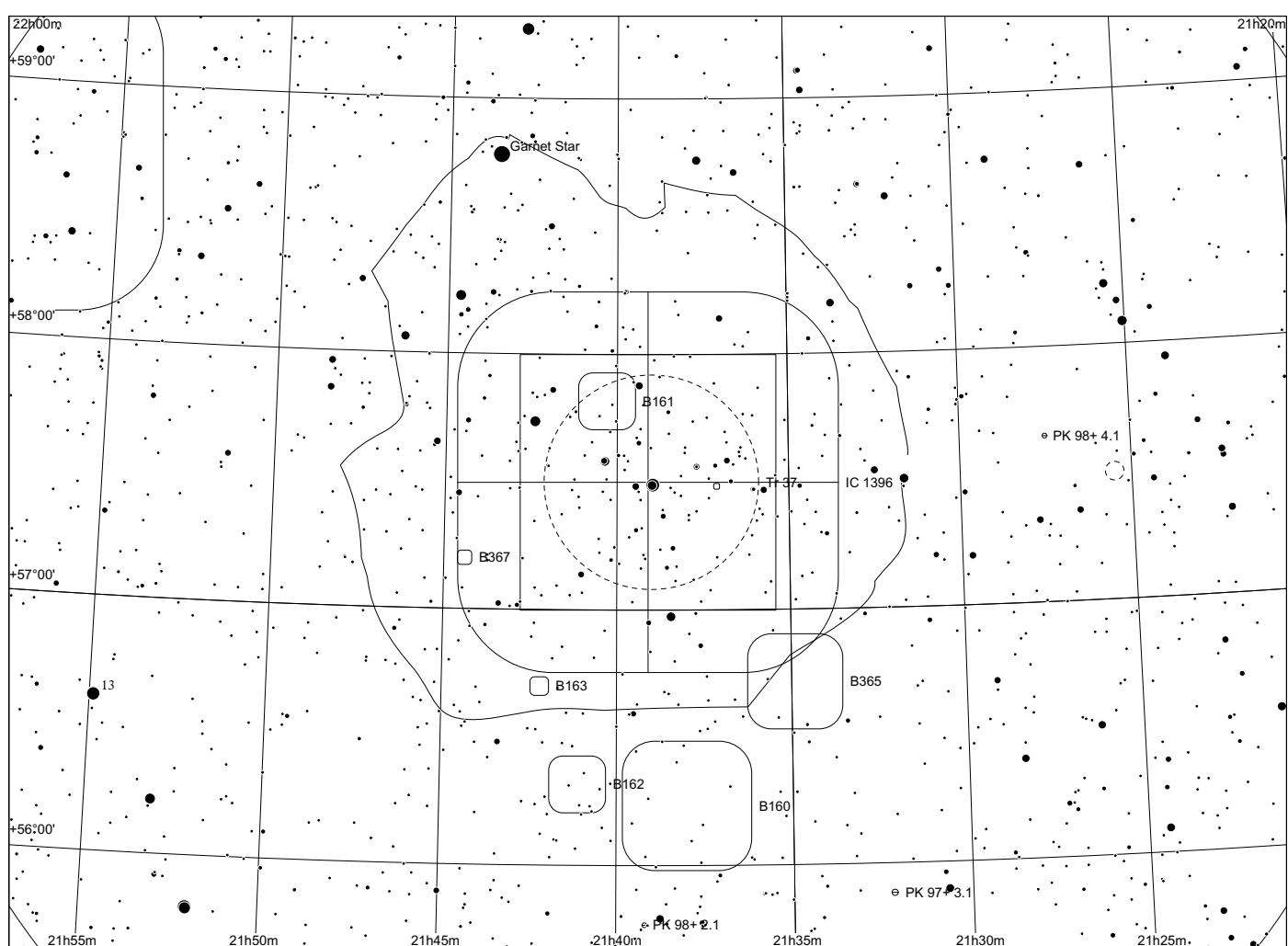
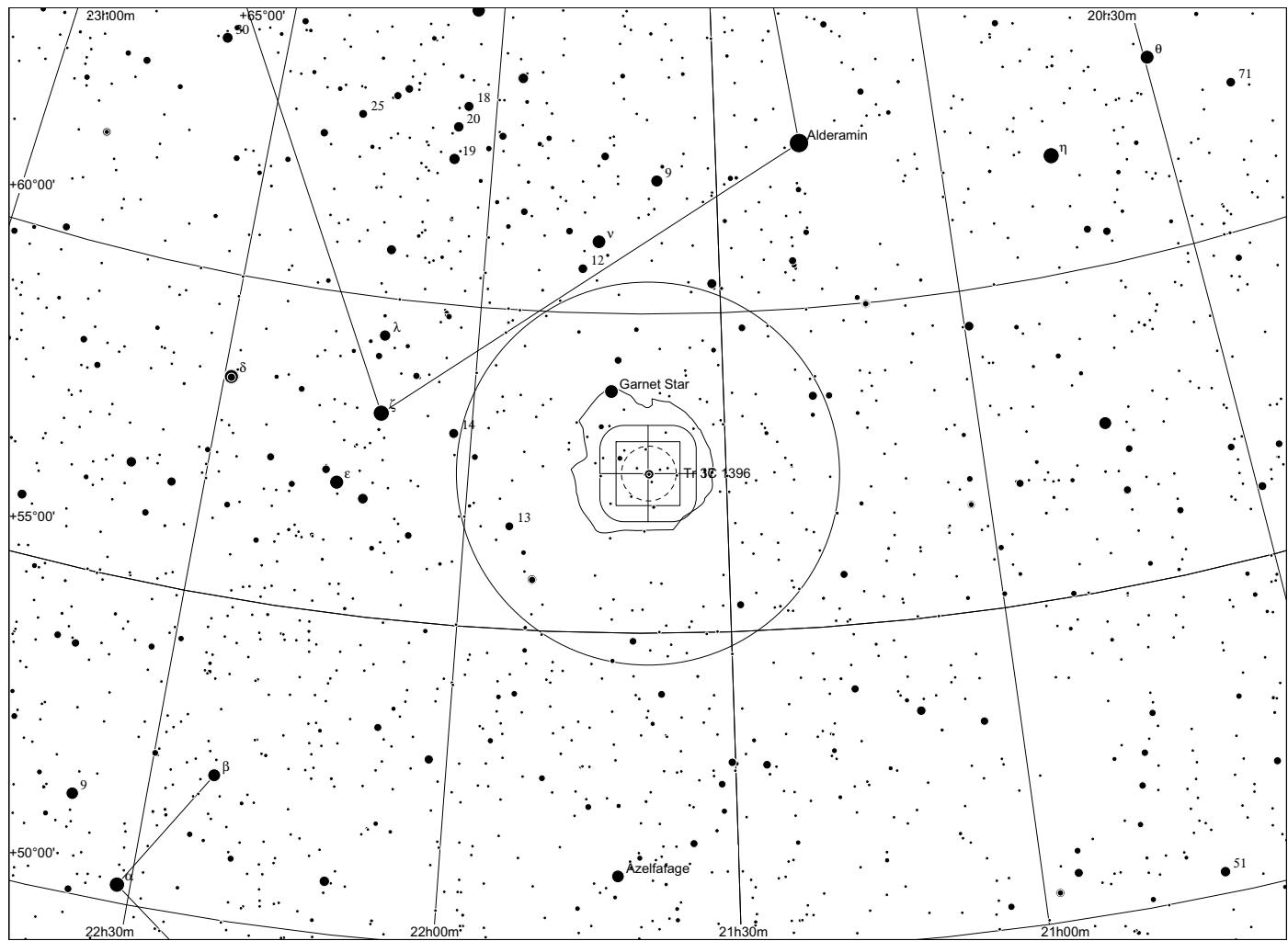
vdB 142

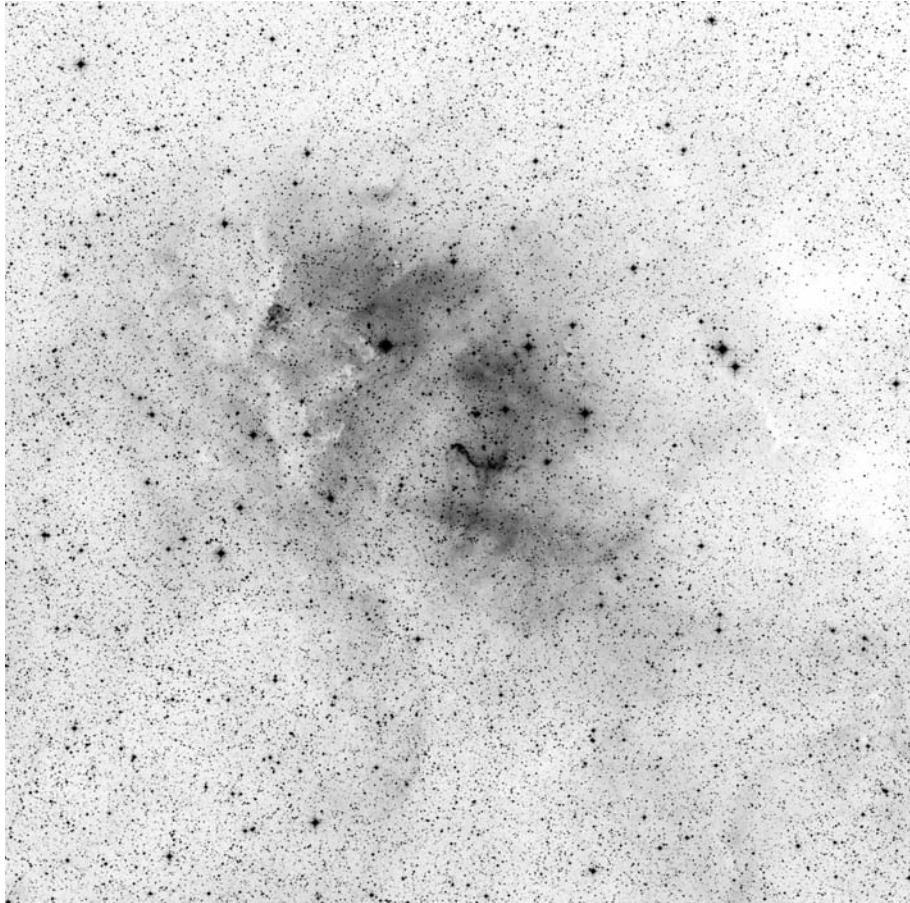
	other name	RA	dec	dia. '	F	S	B
Sh 2-131	IC 1396	21 39 00.2	+57 29 10	170	1	2	2

Distance: 860 pc, Size: 42.5 pc, Source: 1982ApJS...49..183B

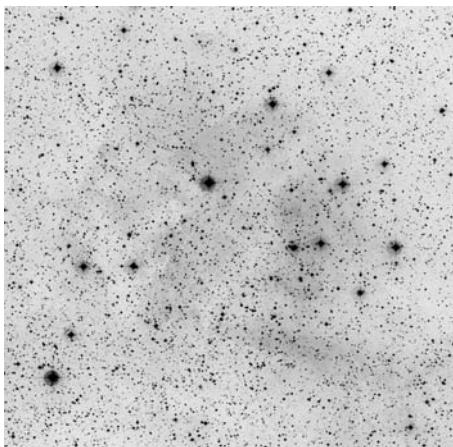
Sh 2-131 surrounds the star cluster IC 1396 and lies at the heart of the Cepheus bubble, the giant expanding shell of gas and dust around the Cep OB2 association.

Observing notes:

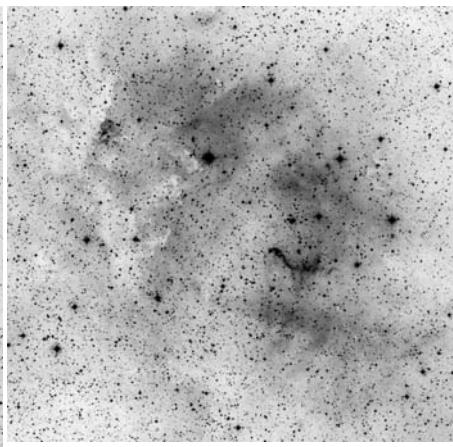




60x60, red



POSS blue



POSS red



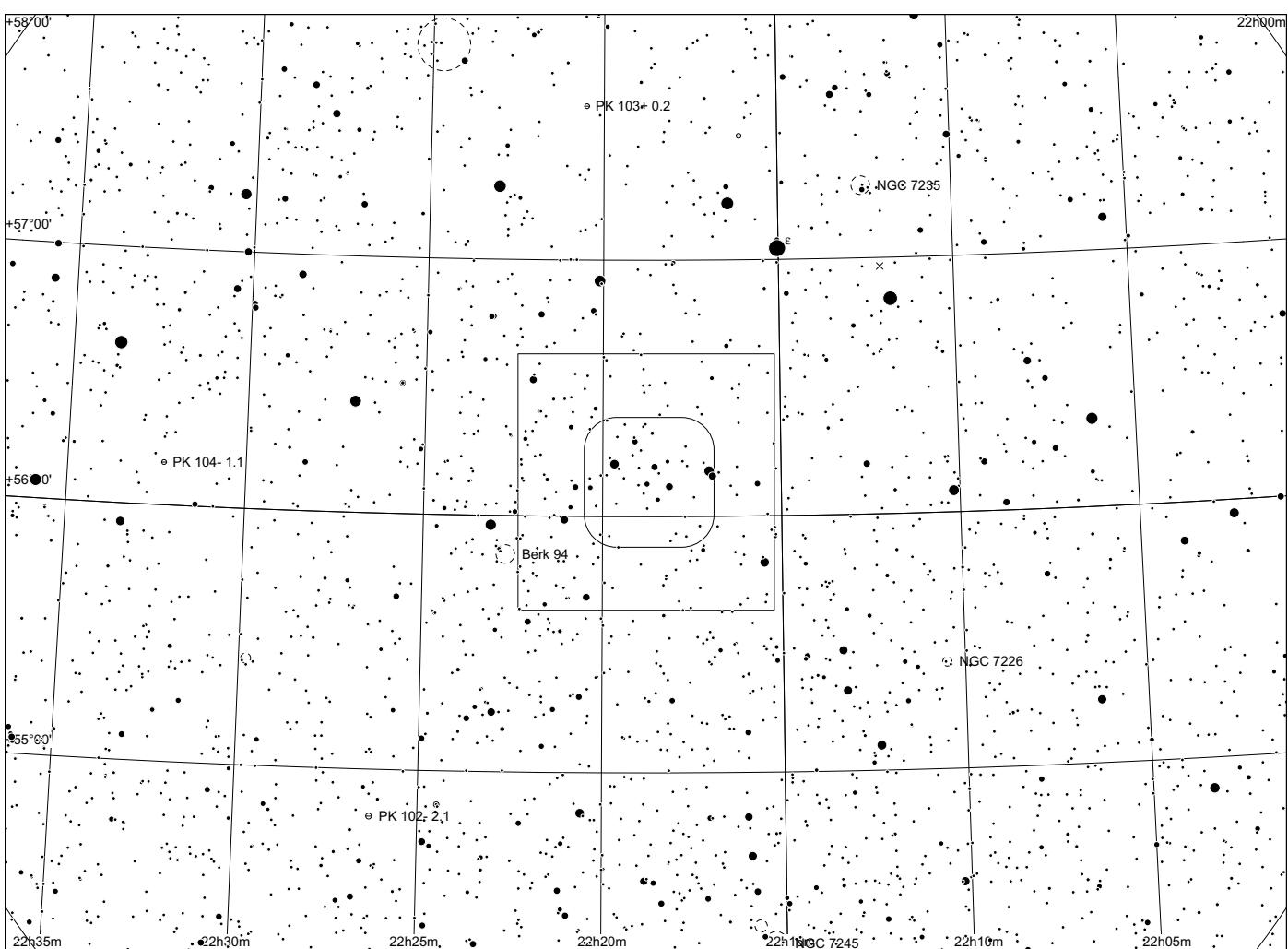
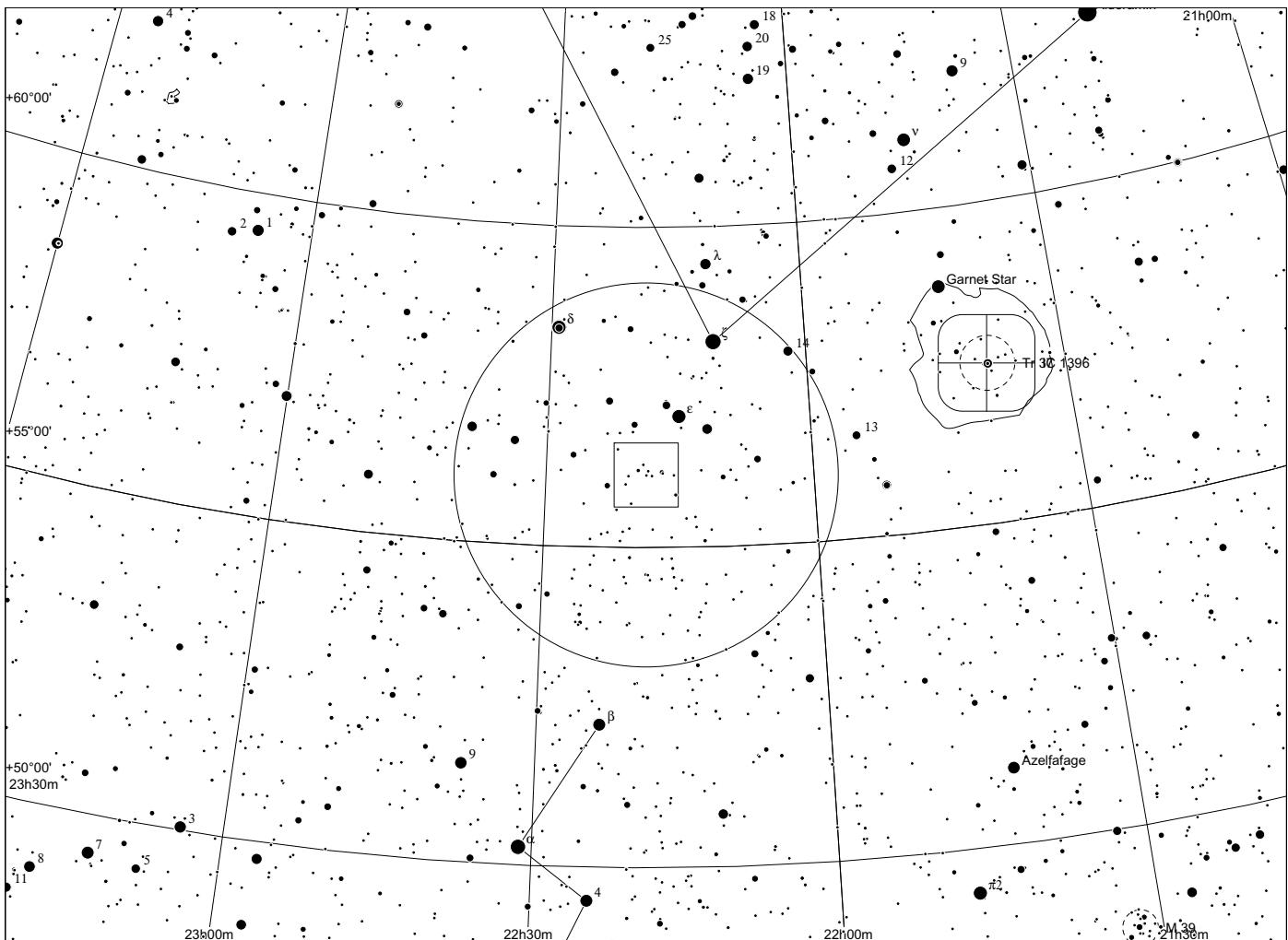
narrowband Dean Salman

	other name	RA	dec	dia. '	F	S	B
Sh 2-132		22 18 47.0	+56 08 05	90	3	3	2

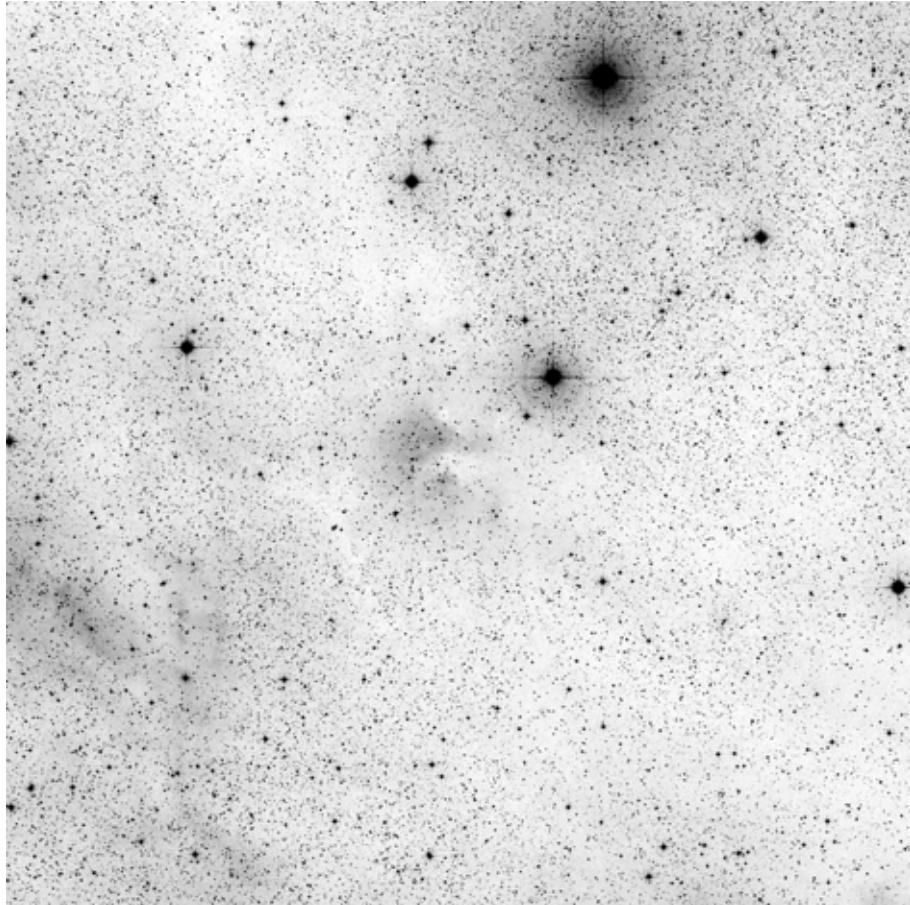
Distance: 3180 pc, Size: 83.3 pc, Source: 1978A&A....70..205H

This giant HII region in the Cepheus OB1 association is ionised by two WR stars and several OB stars. HD 211853 (WR 153) and an O 8.5 star lie near the middle of the radio shell associated with this nebula.

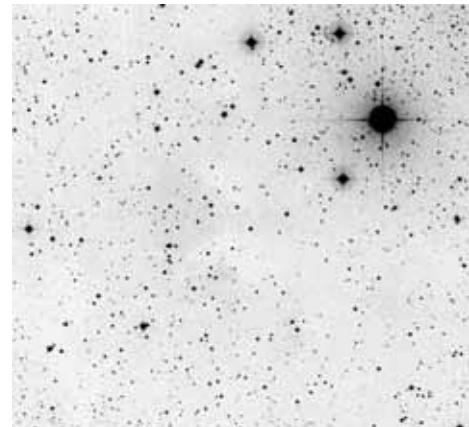
Observing notes:



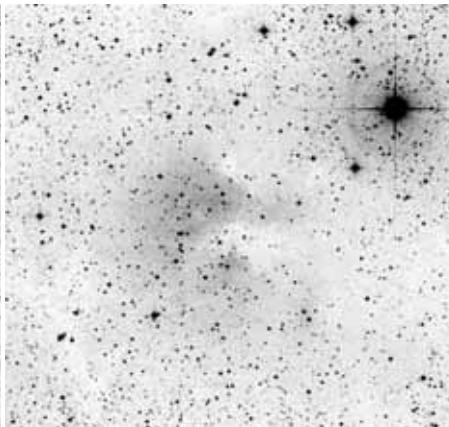
**Sh 2 - 134
in Cepheus**



60x60, red



POSS blue



POSS red



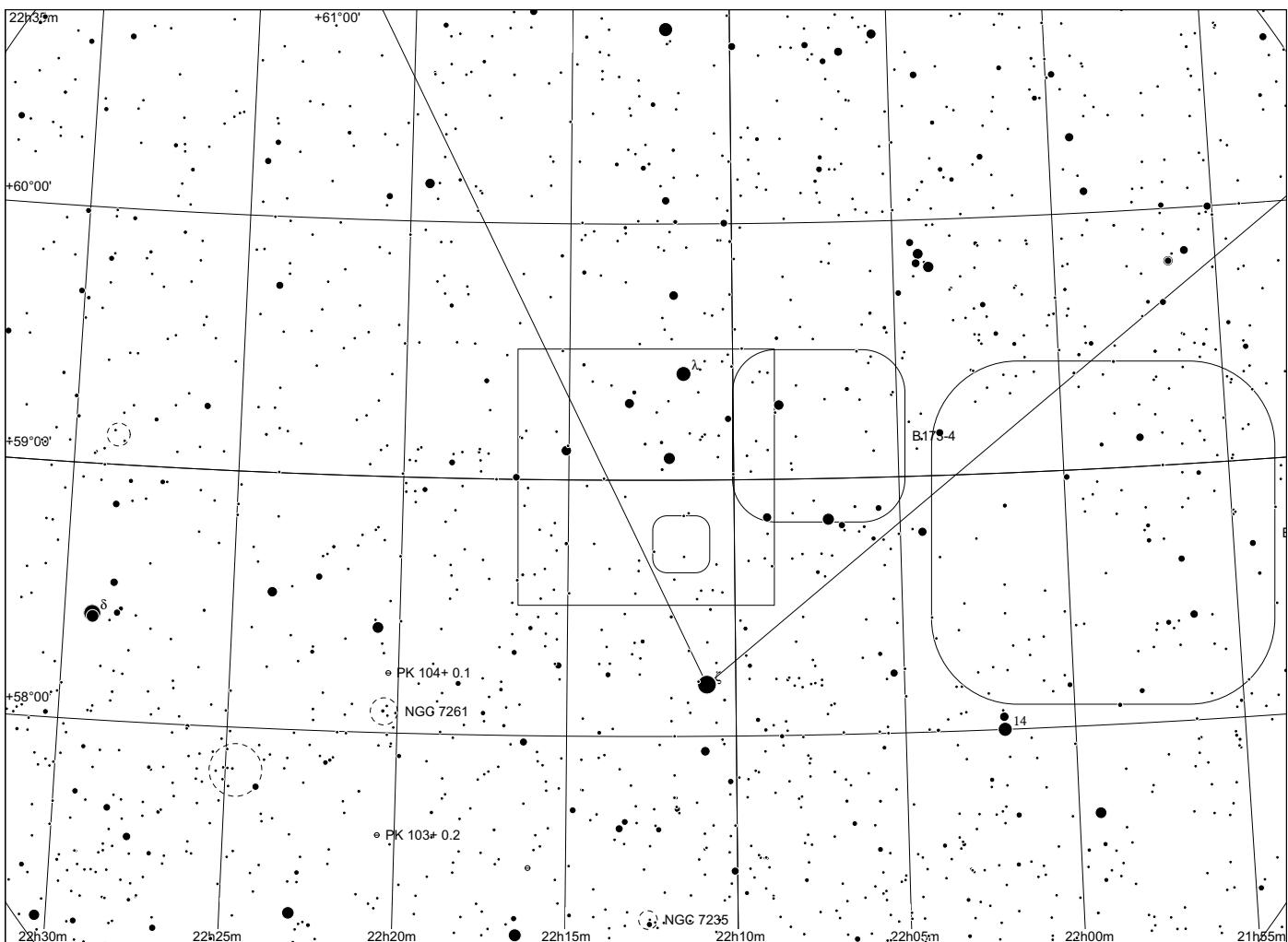
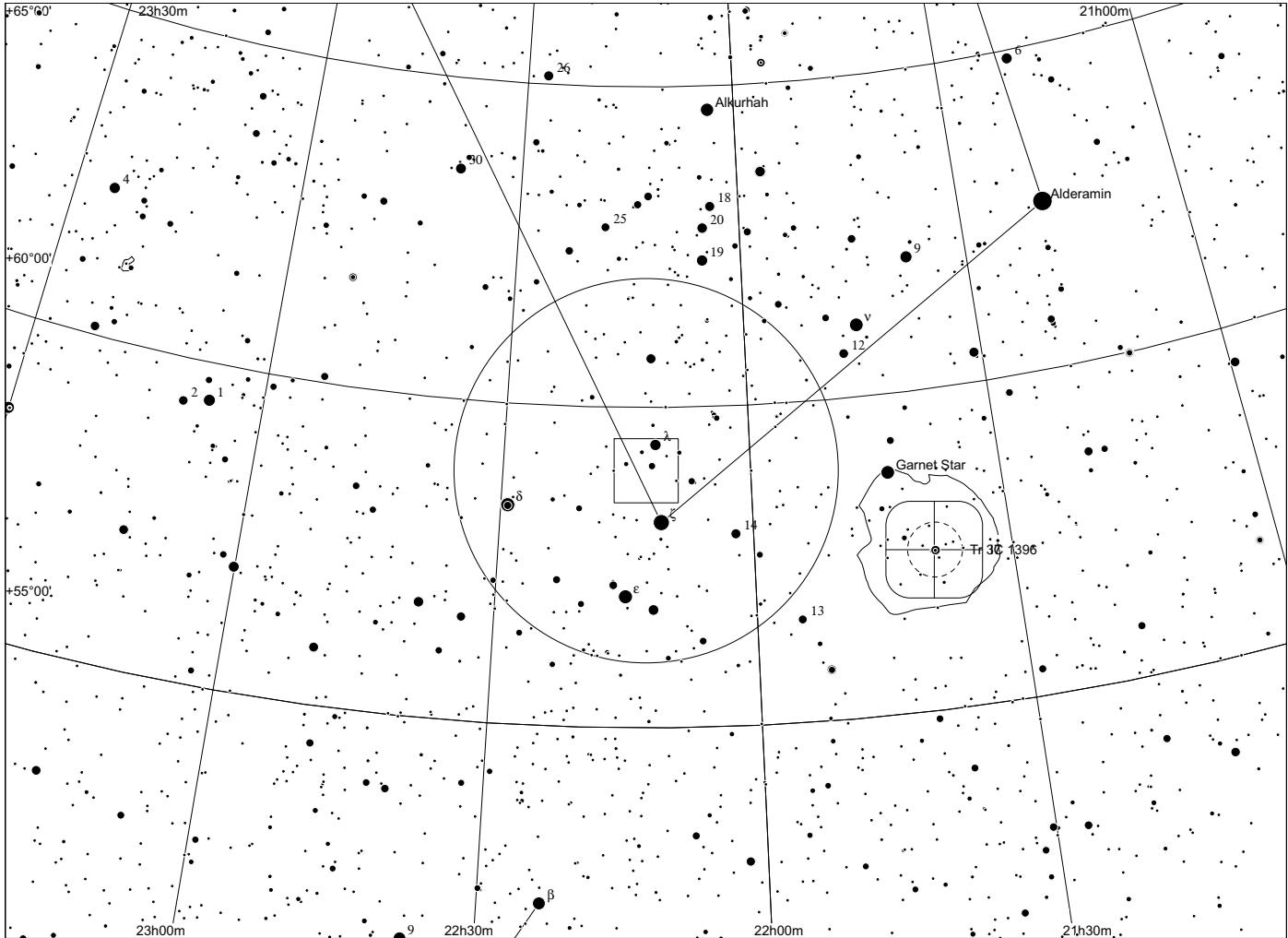
composite

	other name	RA	dec	dia. '	F	S	B
Sh 2-134		22 11 29.1	+59 24 37	160	3	2	2

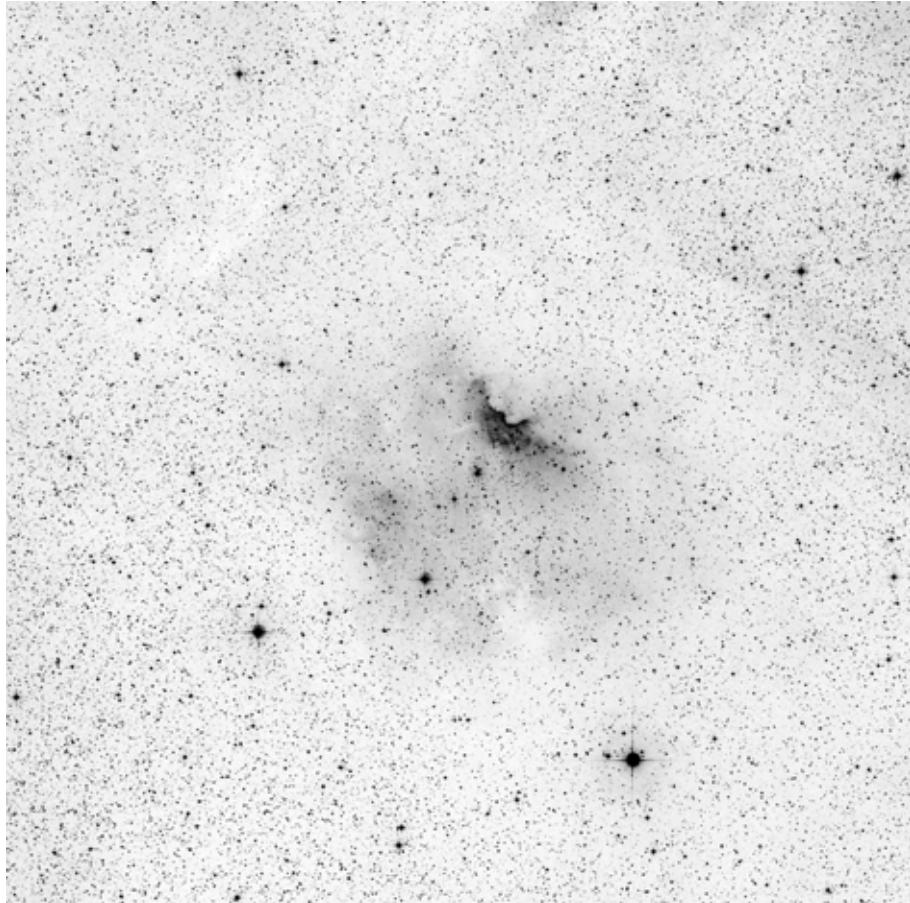
Distance: 900 pc, Size: 41.9 pc, Source: 1982ApJS...49..183B

This HII region is associated with an expanding bubble in Cep OB2. Also involved with this bubble are the HII regions IC 1396 (also called Sh 2-131), S129, S133, and S140. Lam Cep (HD 210839) is the exciting star for this HII region.

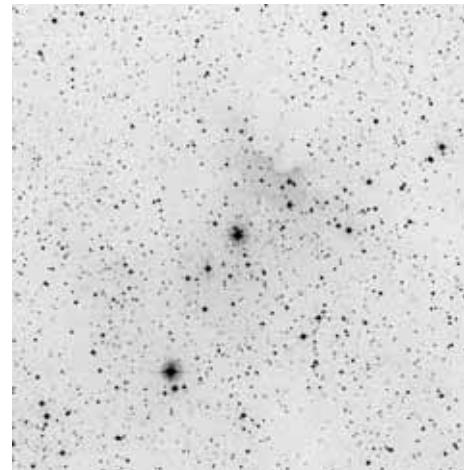
Observing notes:



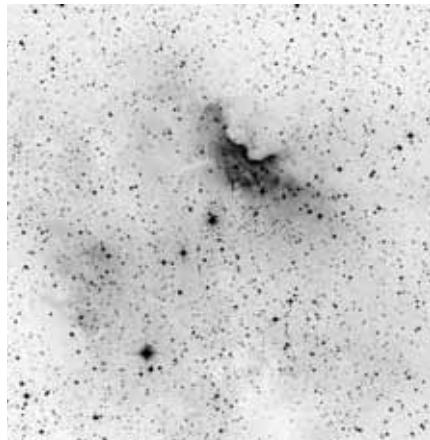
Sh 2 - 135
in Cepheus



60x60, red



POSS blue



POSS red



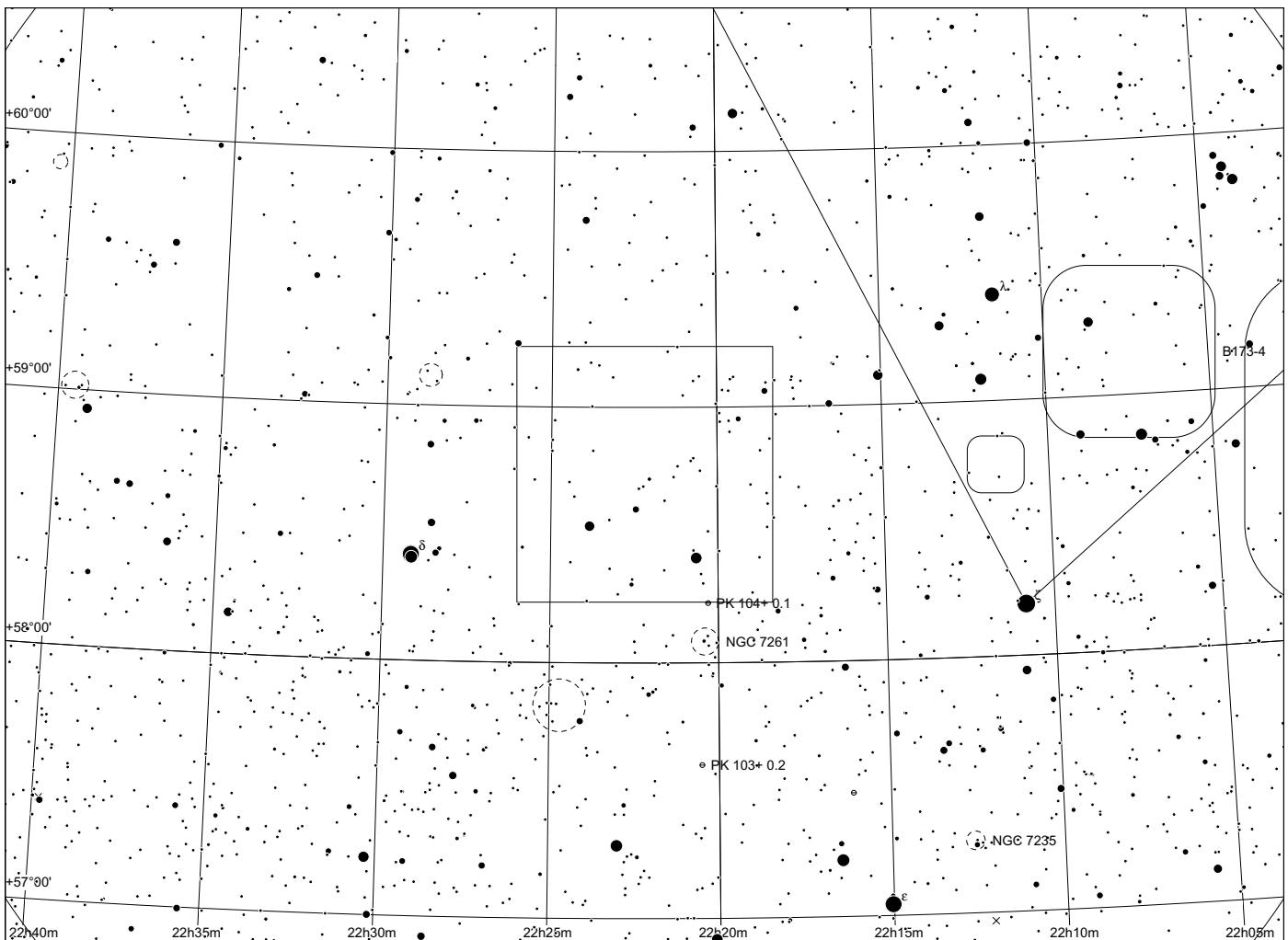
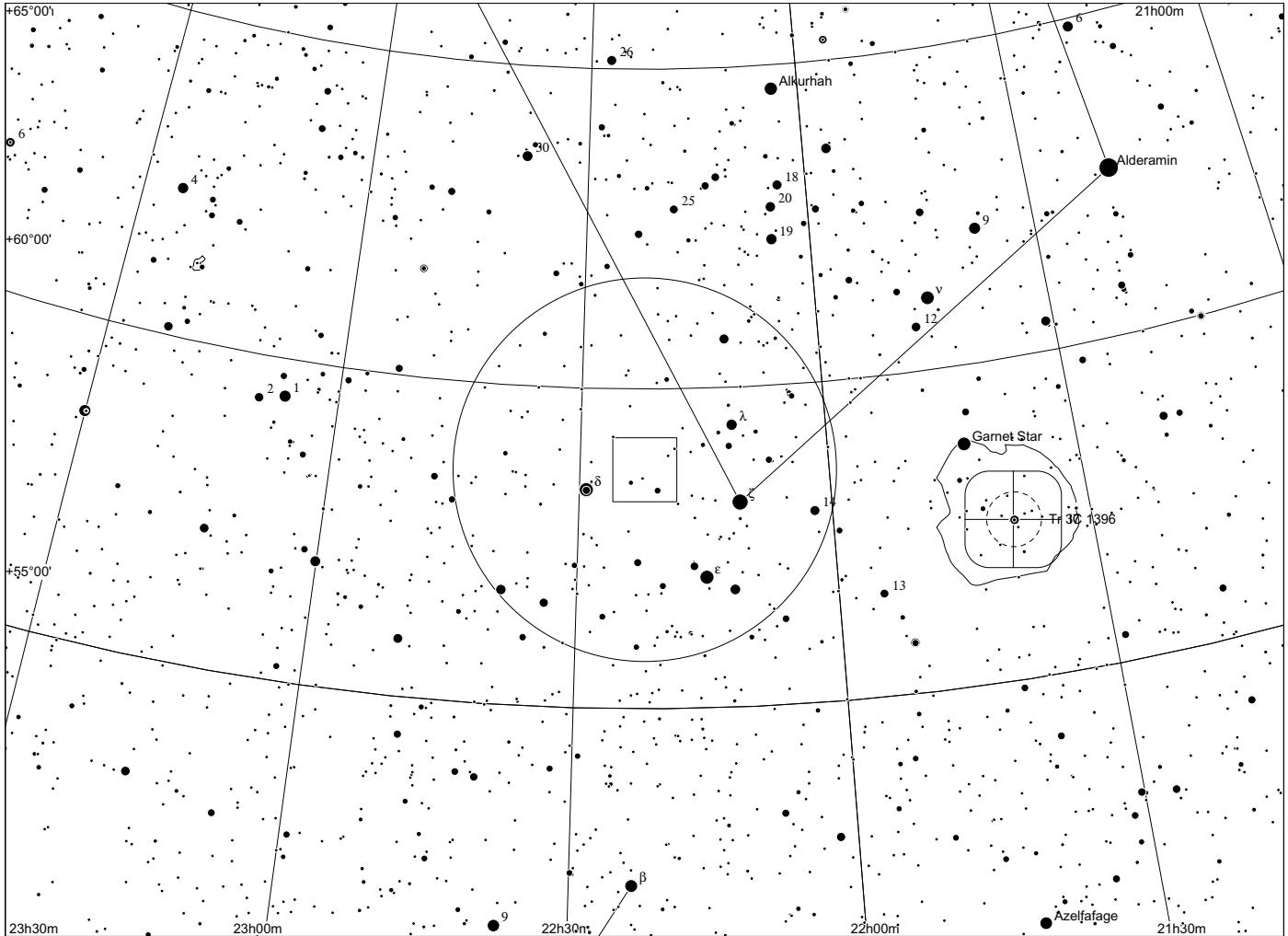
composite

	other name	RA	dec	dia. '	F	S	B
Sh 2-135		22 22 11.0	+58 44 18	15	3	2	2

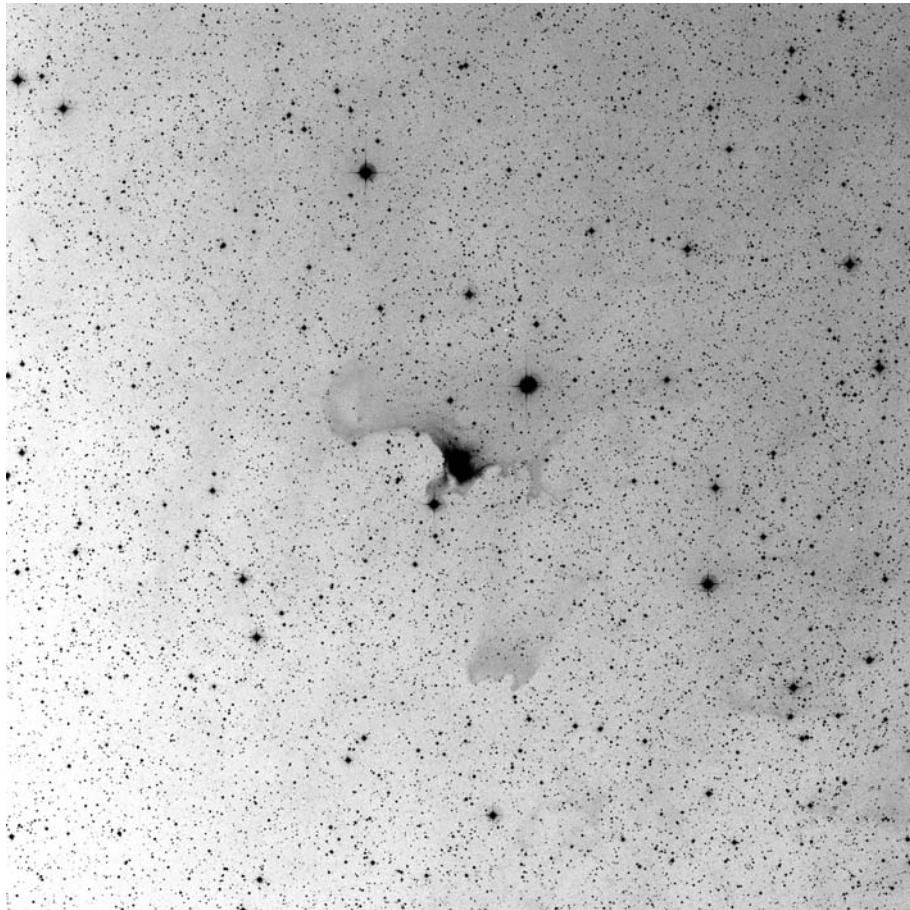
Distance: 1400 pc, Size: 6.1 pc, Source: 1982ApJS...49..183B

This is probably a blister on a dark dust cloud in front of the bright nebula. The nebula is ionised by an O9.5V class star and located at a distance of 1900 parsecs.

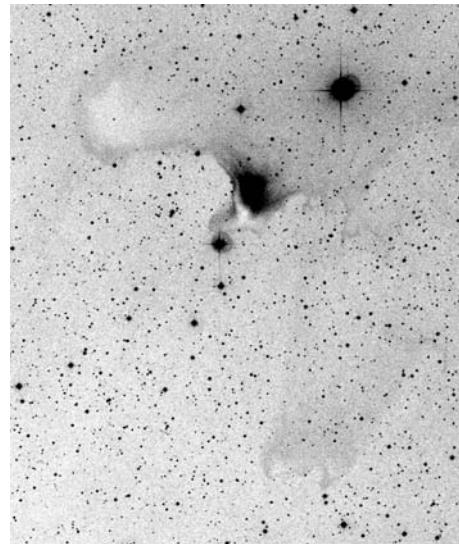
Observing notes:



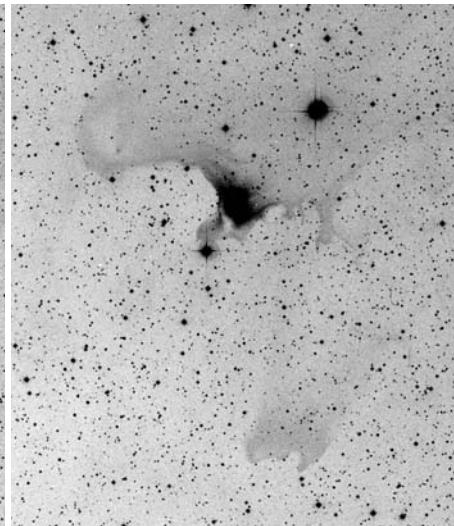
Sh 2 - 136
in Cepheus



60x60, red



POSS blue



POSS red

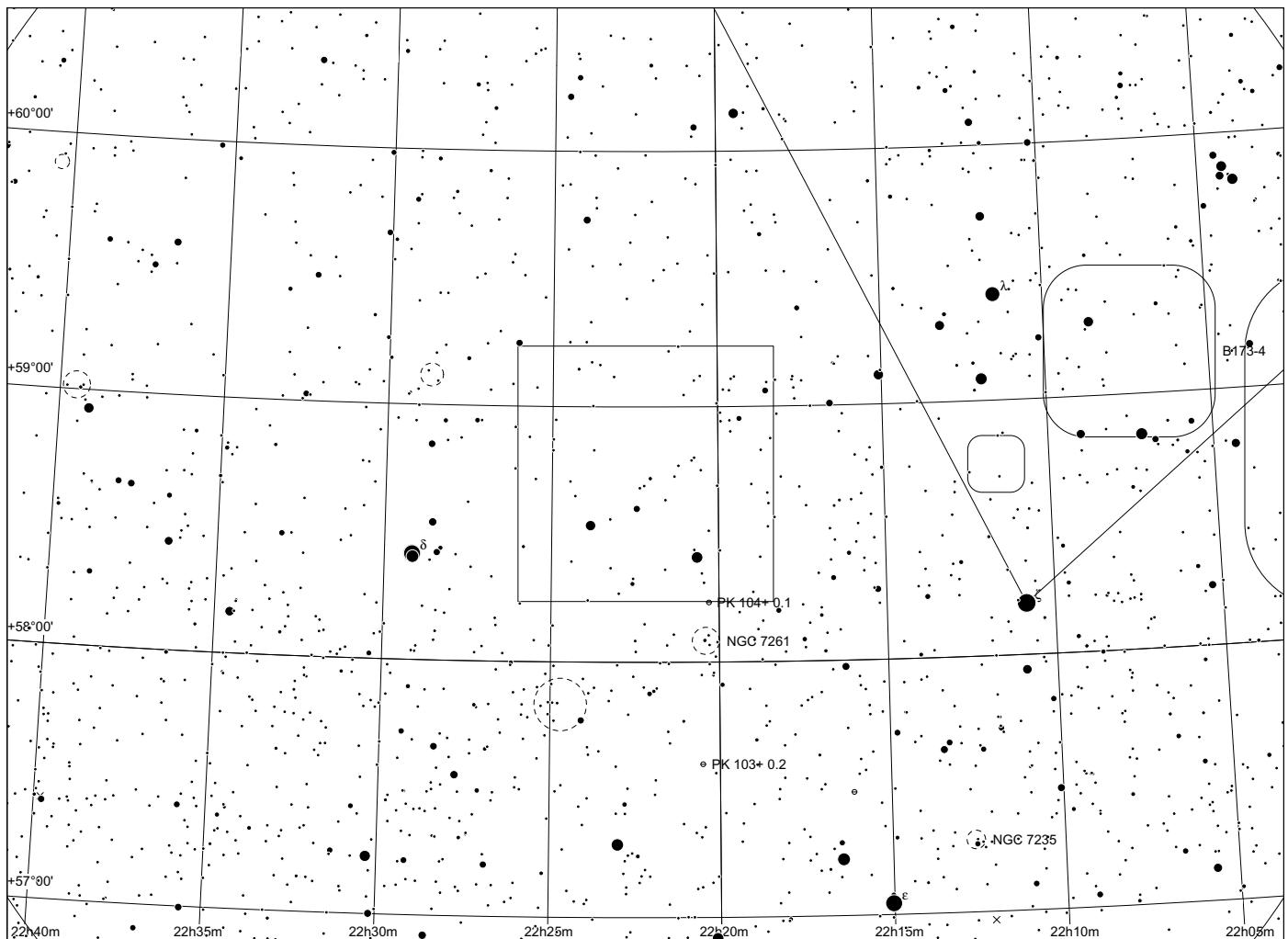
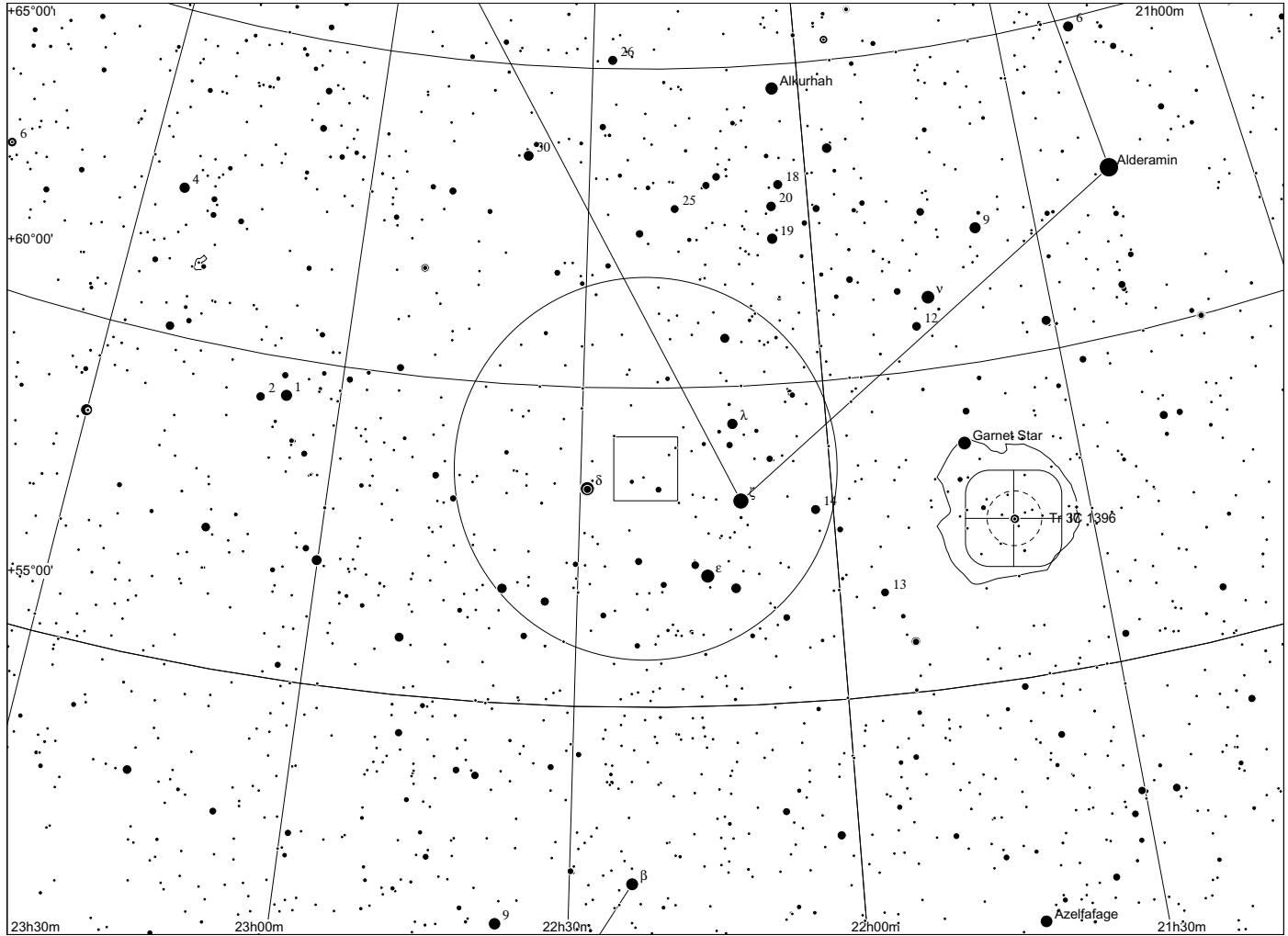
composite

	other name	RA	dec	dia. '	F	S	B
Sh 2-136	Gespensternebel	21 16 29.5	+68 15 12	5	3	2	3

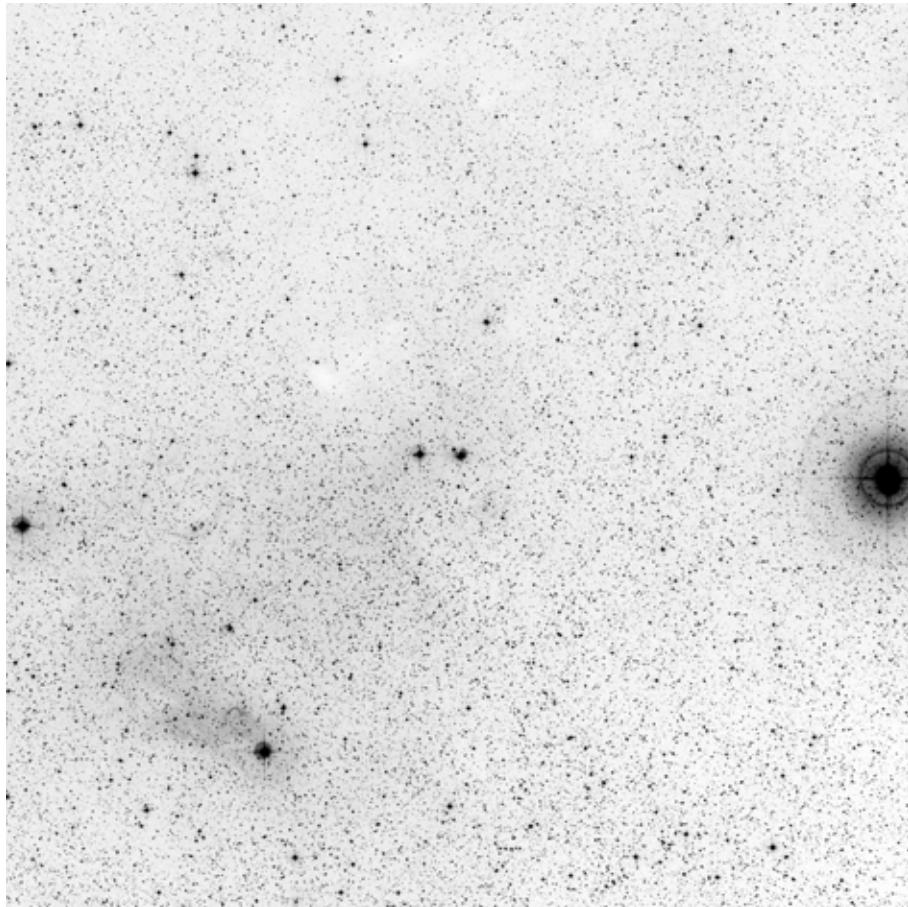
Distance: 450 pc, Size: 0.7 pc, Source: 2005MmSAI..76..400M

This is a Bok globule, not an HII region. Inside the glowing globule, CB 230, new stars are being born.

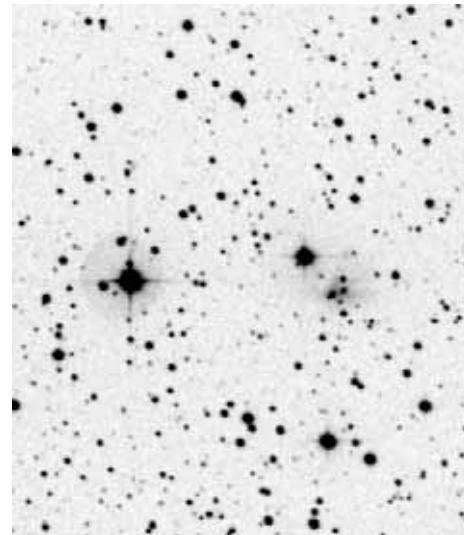
Observing notes:



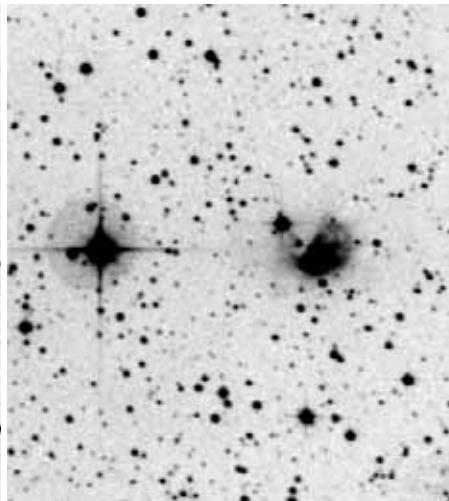
Sh 2 - 138
in Cepheus



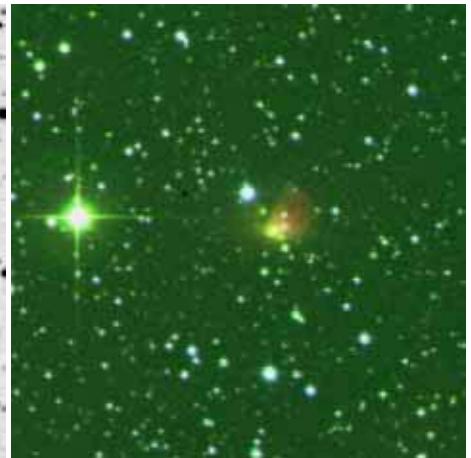
60x60, red



POSS blue



POSS red



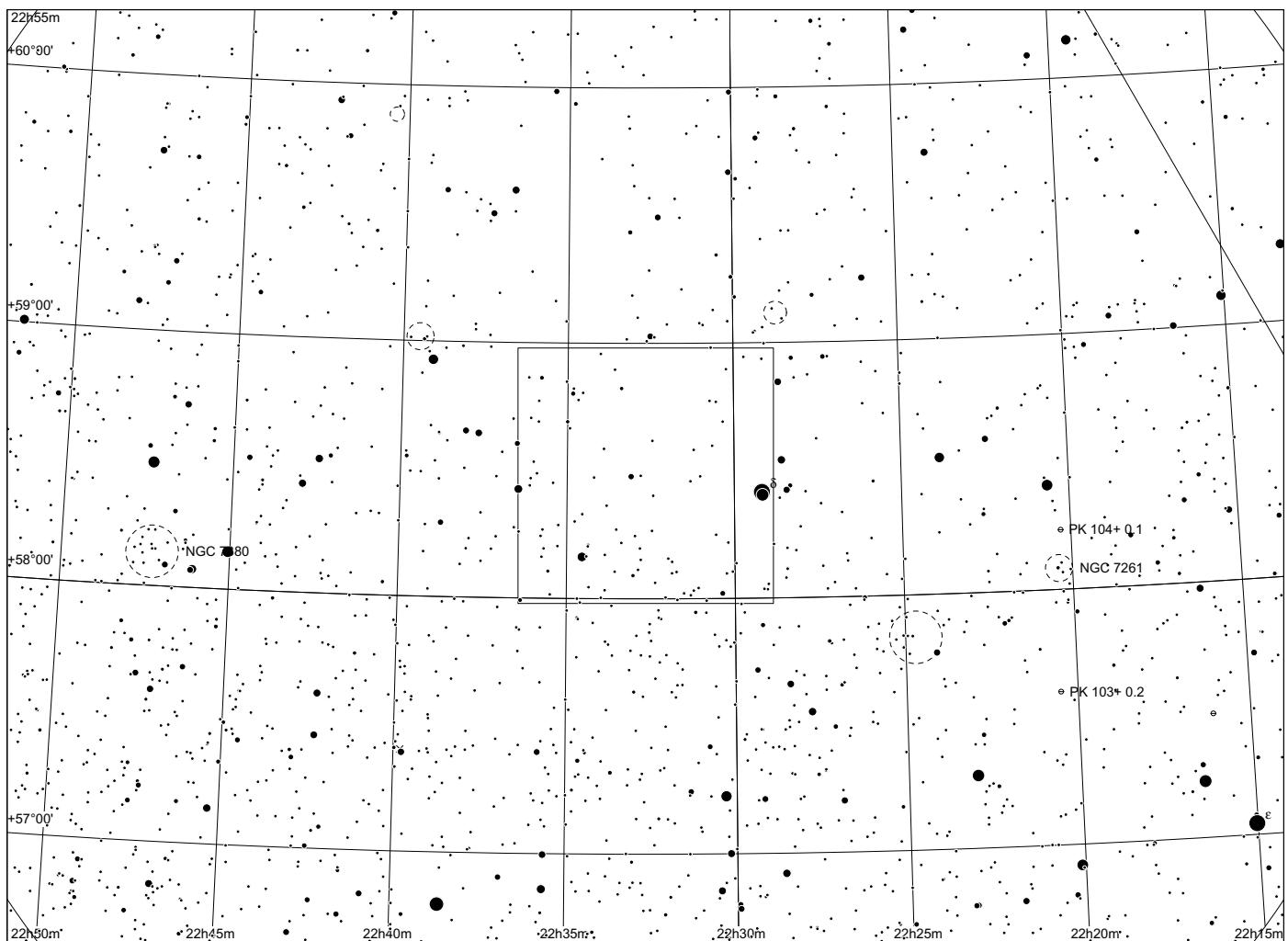
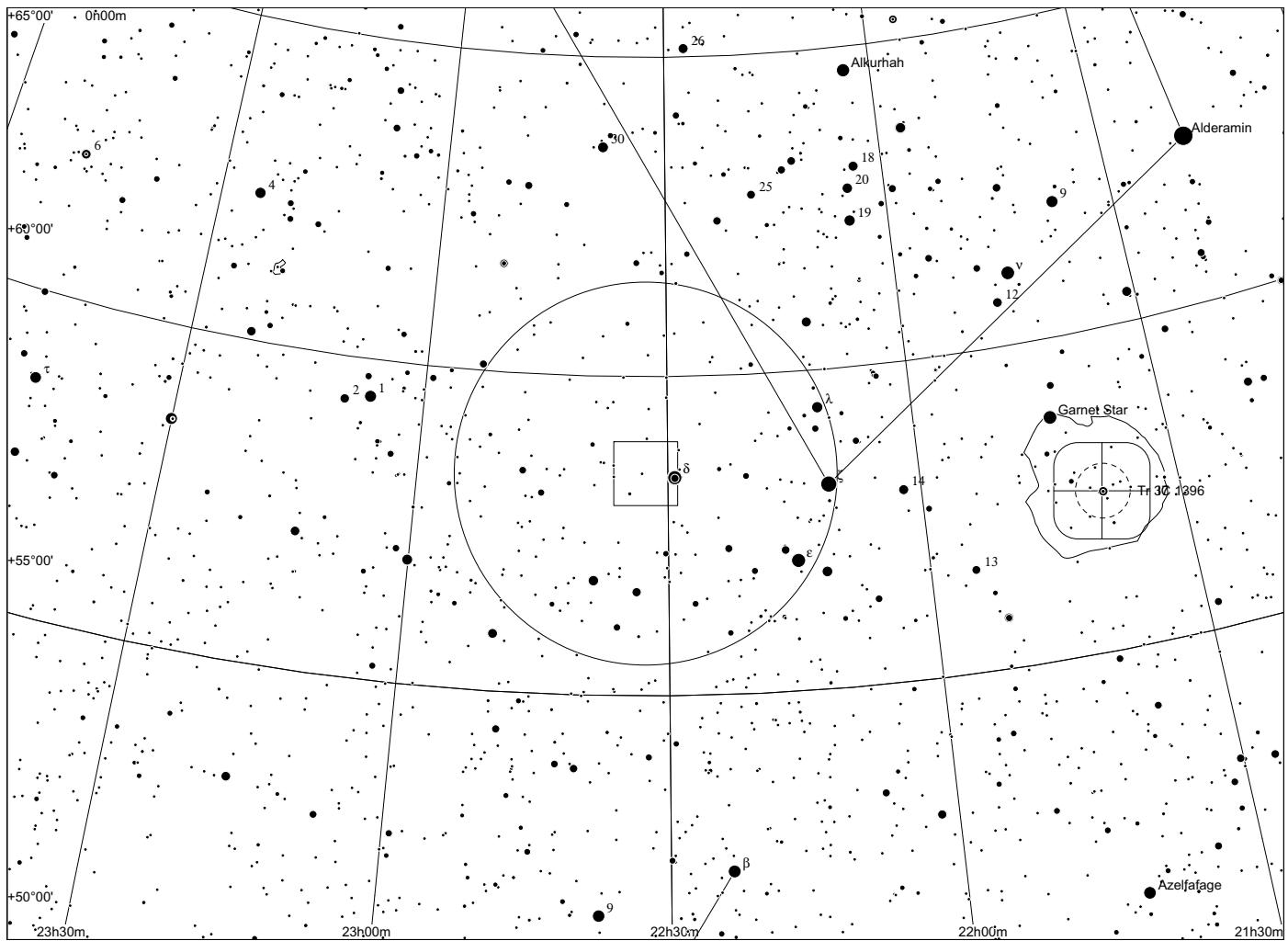
composite

	other name	RA	dec	dia. '	F	S	B
Sh 2-138		22 32 39.0	+58 28 55	1	3	2	2

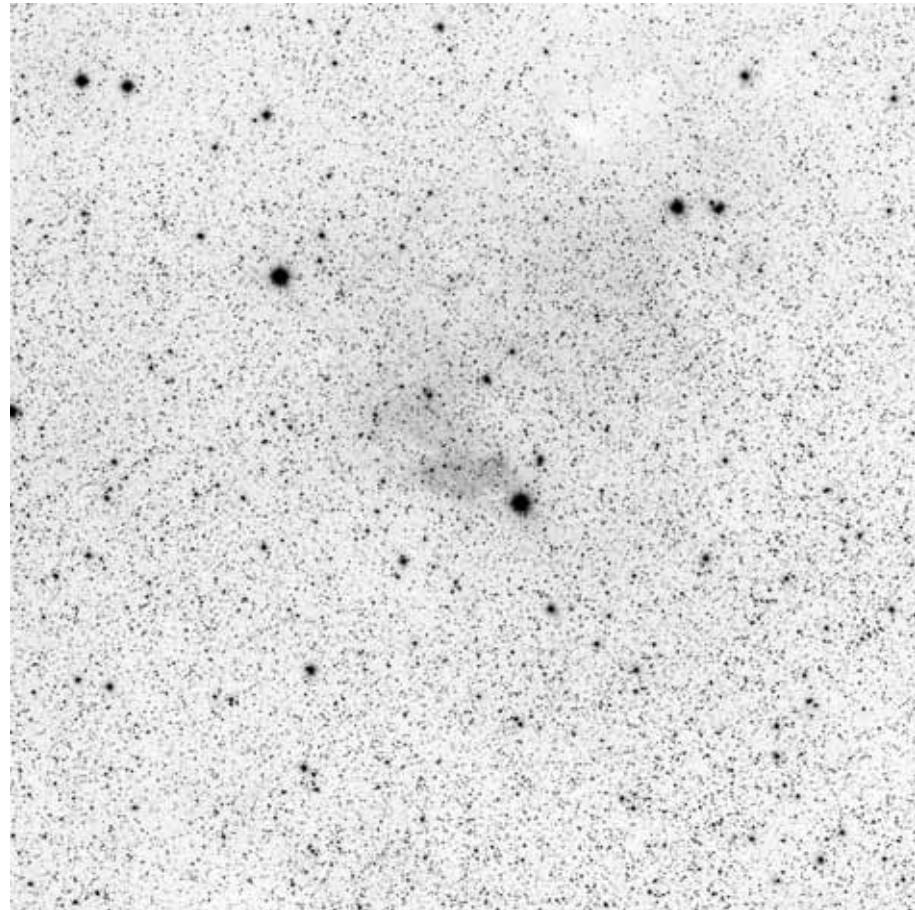
Distance: 4000 pc, Size: 1.2 pc, Source: 2003A&A...397..133R

Embedded in this compact HII region is a large star cluster resembling the Orion Trapezium cluster: it is centrally peaked around several massive stars, and is dense - more than 550 stars at its centre.

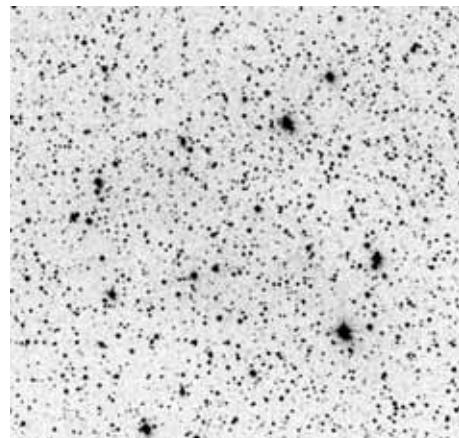
Observing notes:



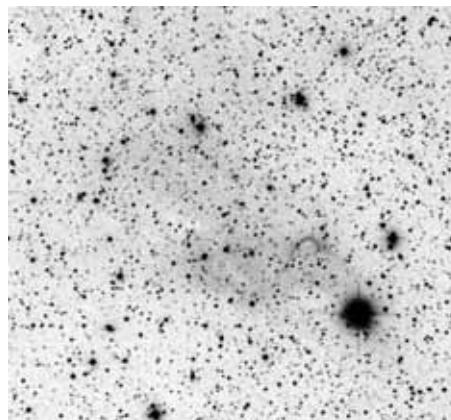
Sh 2 - 139
in Cepheus



60x60, red



POSS blue



POSS red

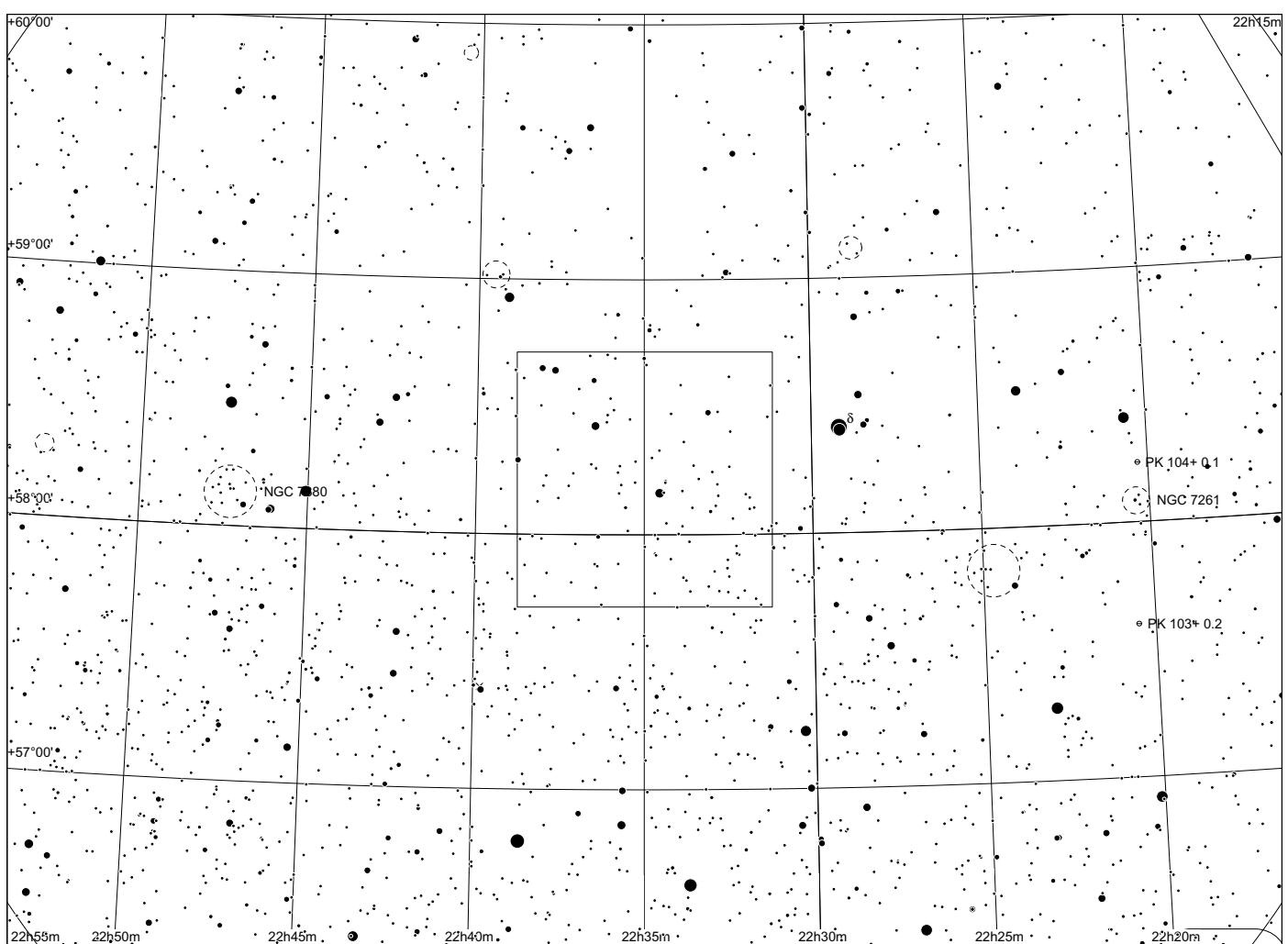
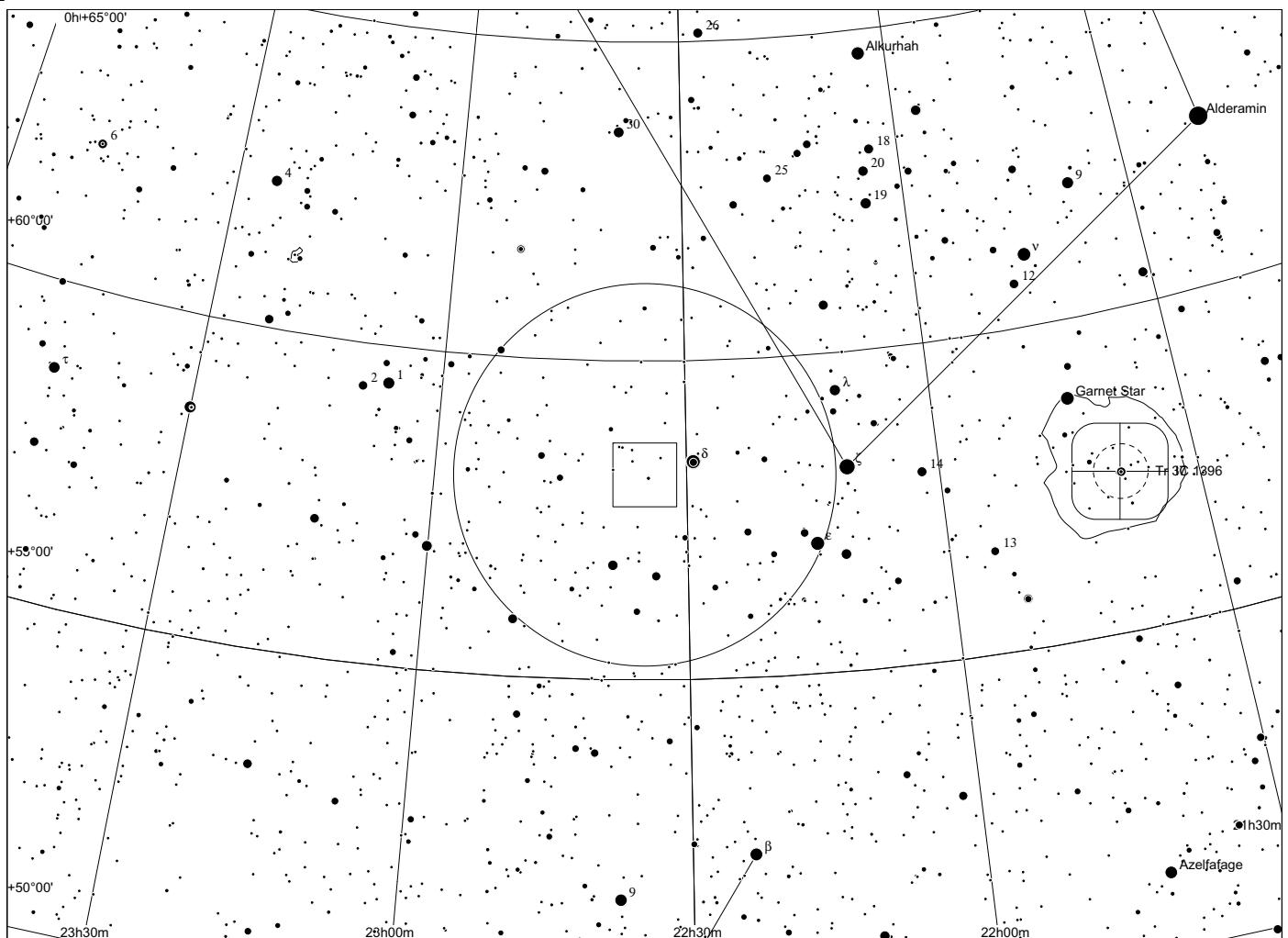


composite

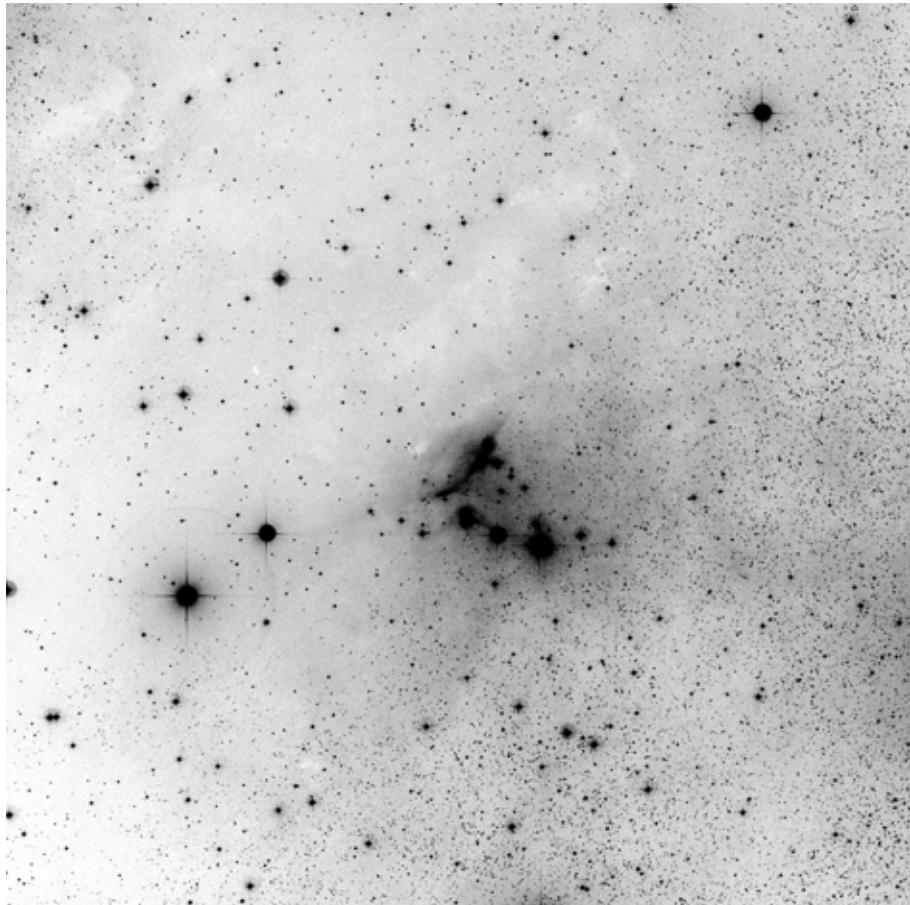
	other name	RA	dec	dia. '	F	S	B
Sh 2-139		22 34 59.4	+58 13 02	10	3	2	1

Distance: 3300 pc, Size: 24.0 pc, Source: 1982ApJS...49..183B

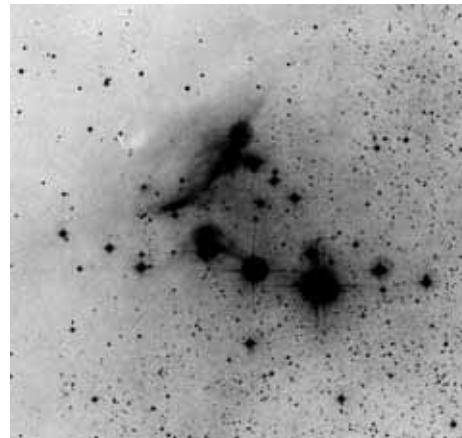
Observing notes:



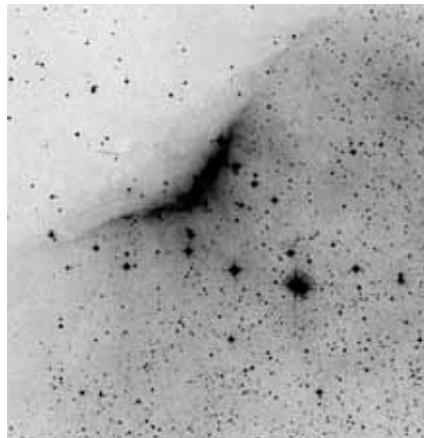
Sh 2 - 140
in Cepheus



60x60, blue



POSS blue



POSS red



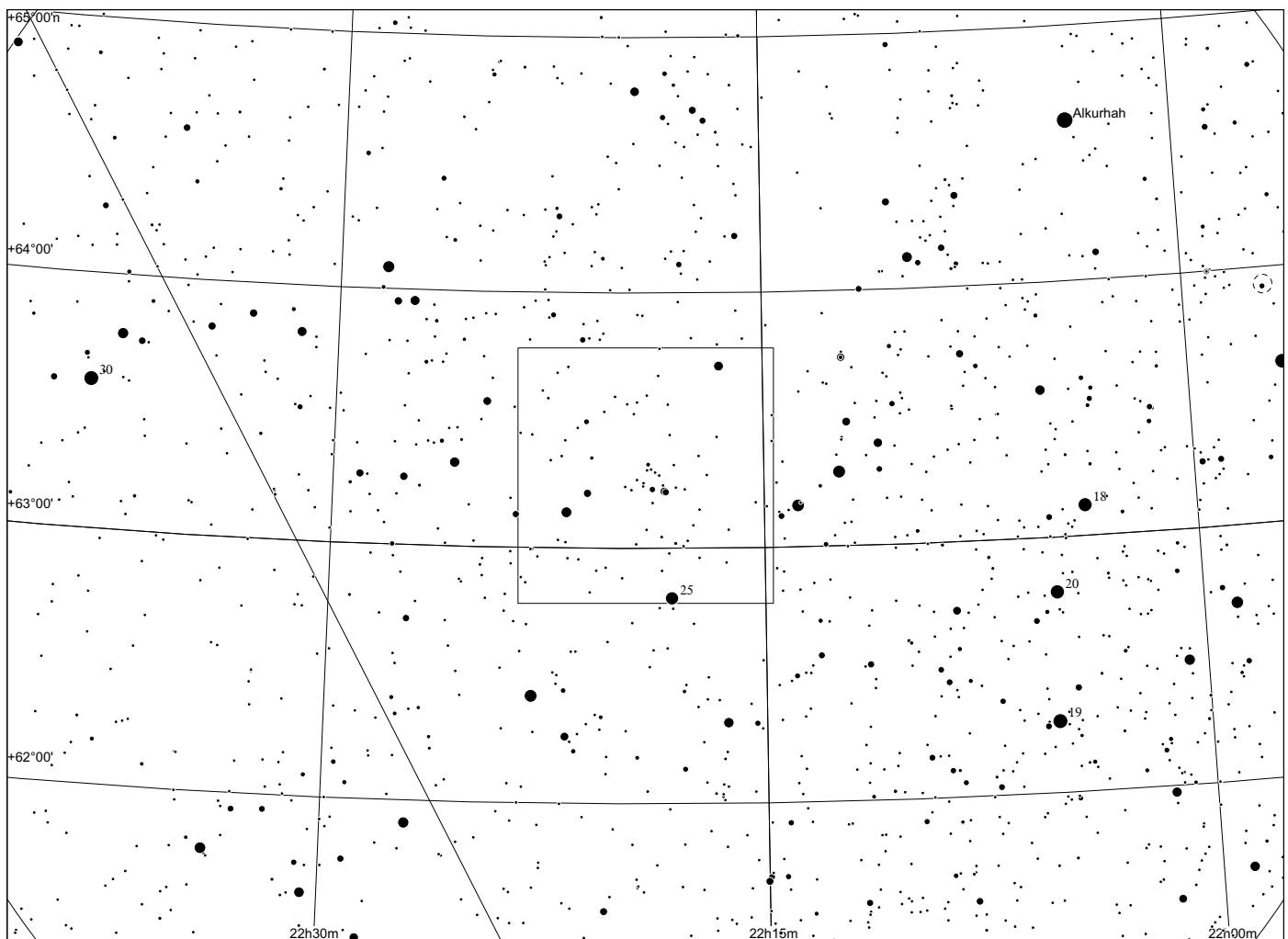
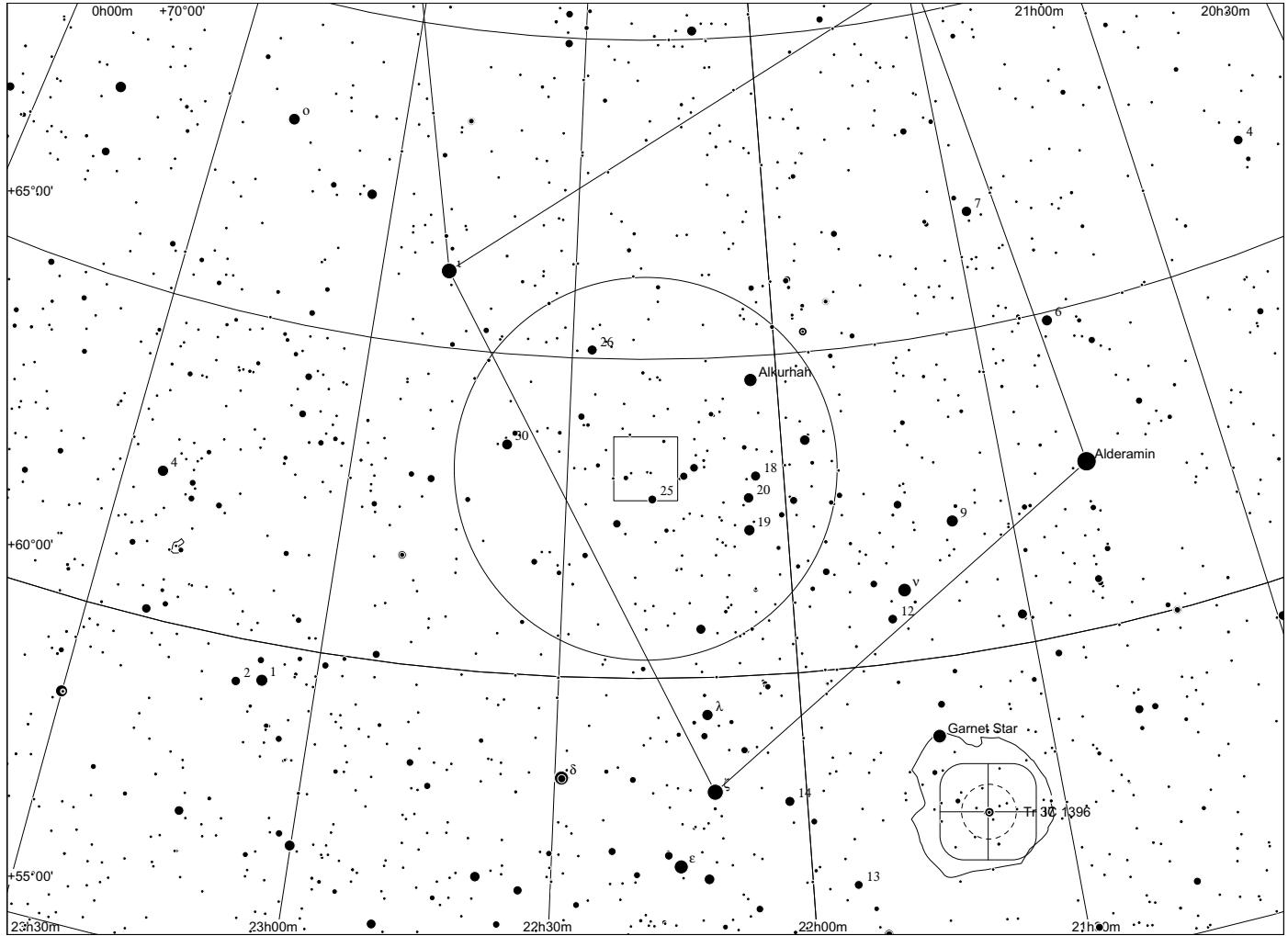
composite

	other name	RA	dec	dia. '	F	S	B
Sh 2-140		22 19 07.0	+63 17 07	30	2	2	3

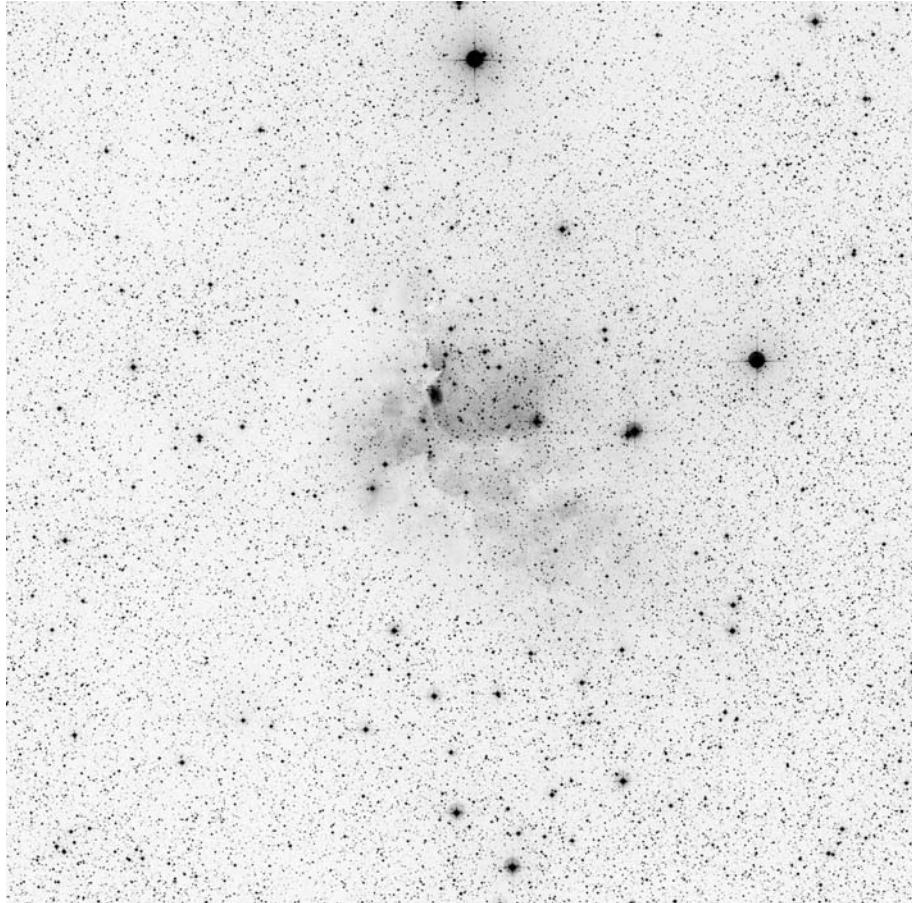
Distance: 900 pc, Size: 7.9 pc, Source: 1982ApJS...49..183B

Sh 2-140 is created by the B0.5 V star HD 211880 exciting the southwest side of the L1204 molecular cloud.

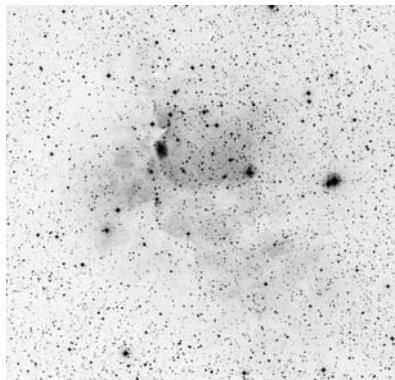
Observing notes:



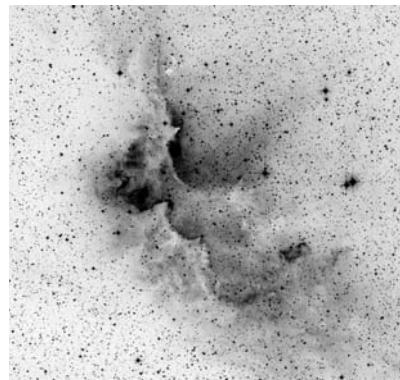
**Sh 2 - 142
in Cepheus**



60x60, blue



POSS blue



POSS red



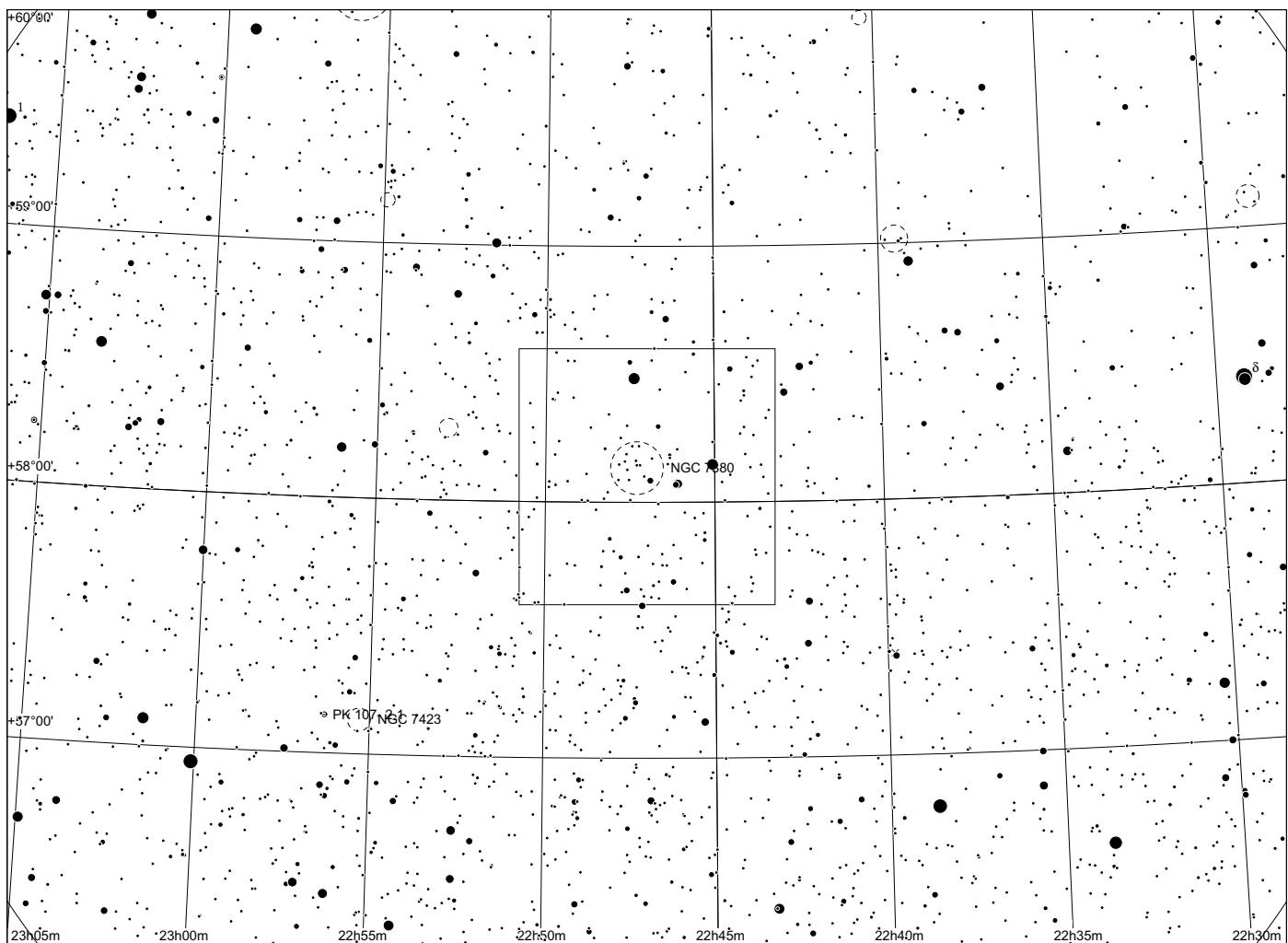
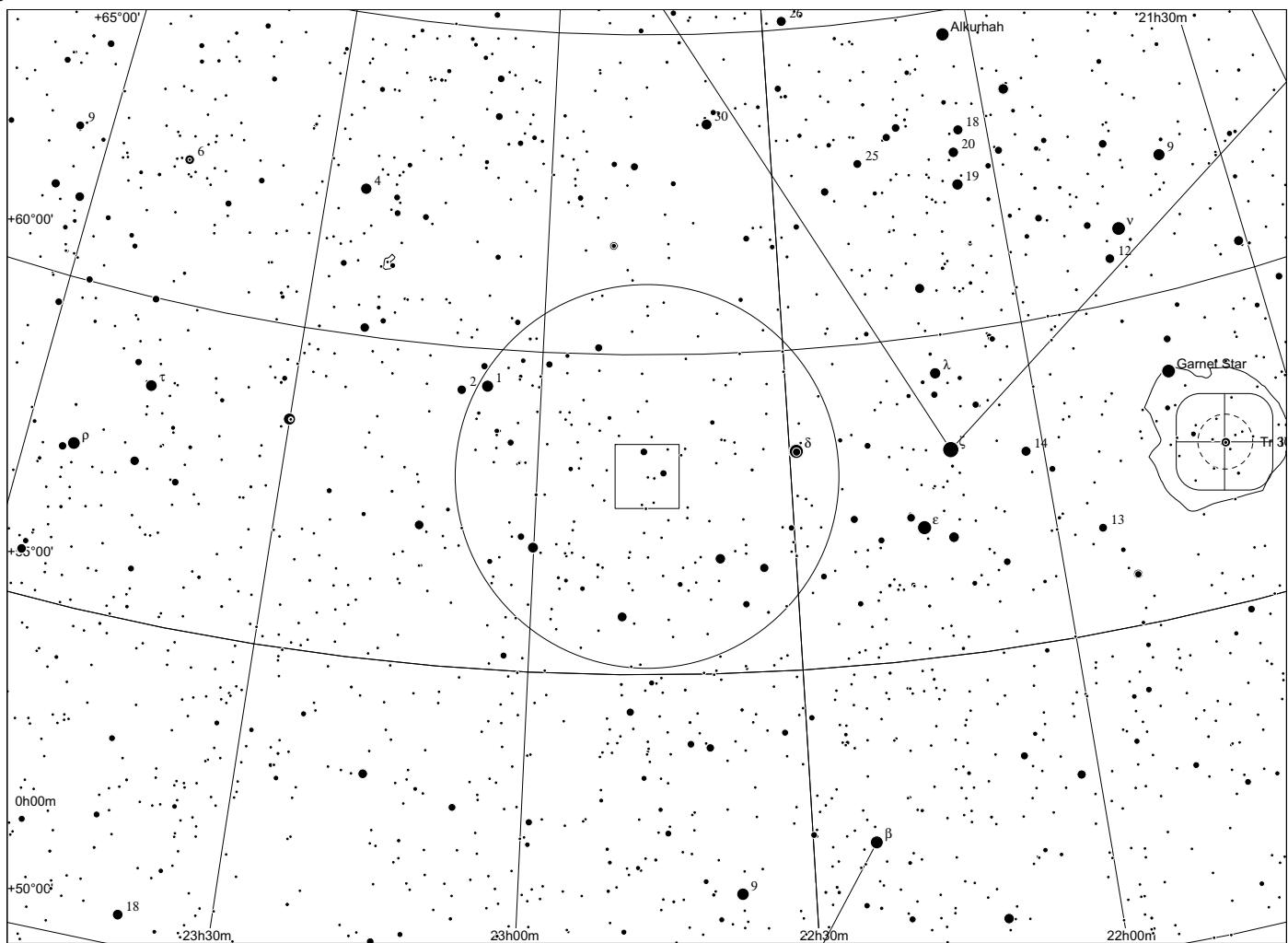
narrow band Dean Salman

	other name	RA	dec	dia. '	F	S	B
Sh 2-142	Contains NGC7380	22 47 35.1	+58 03 39	30	3	3	3

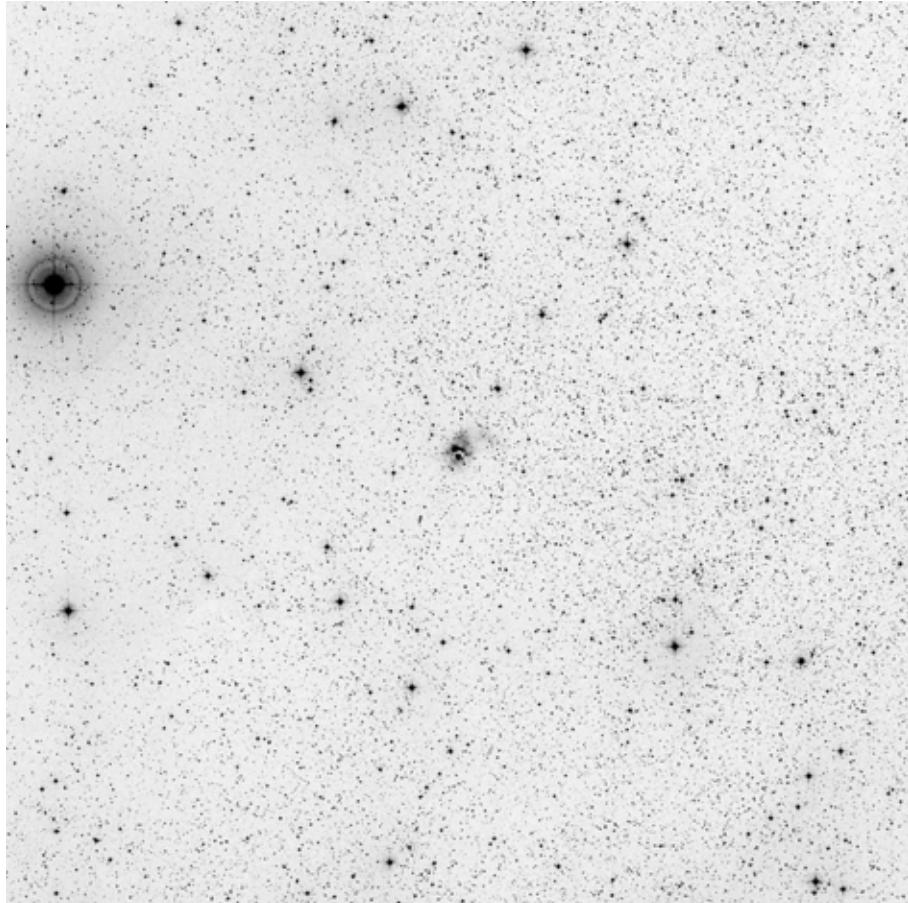
Distance: 3537 pc, Size: 7.2 pc, Source: 2003A&A...397..213P

This HII region, entwined with the star cluster NGC 7380, contains 4000 solar masses of gas and is ionised by the eclipsing binary star DH Cephei (O6+O6). It is associated with a molecular cloud containing an additional 6-15 thousand solar masses of gas, and the star cluster NGC 7382, which are all part of the Cepheus OB1 association.

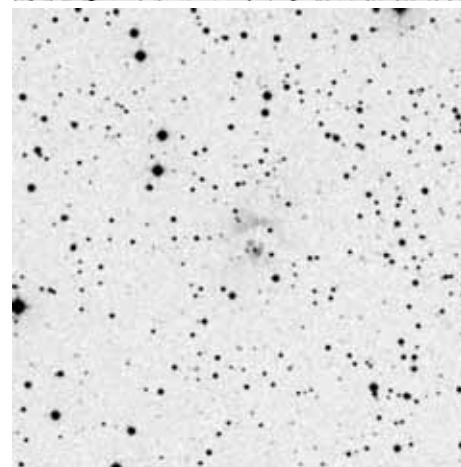
Observing notes:



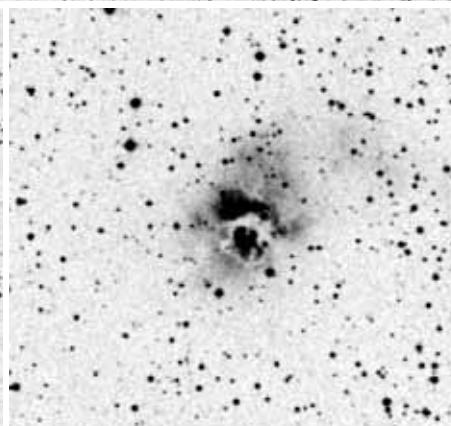
Sh 2 - 146
in Cepheus



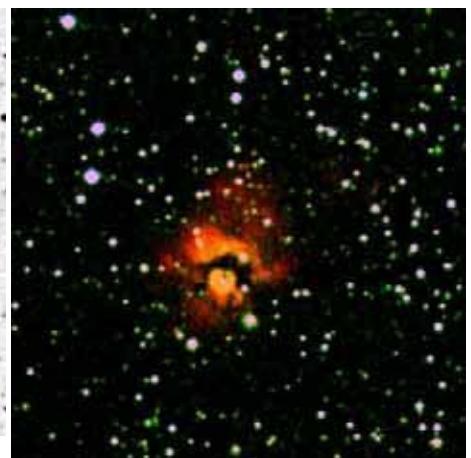
60x60, red



POSS blue



POSS red



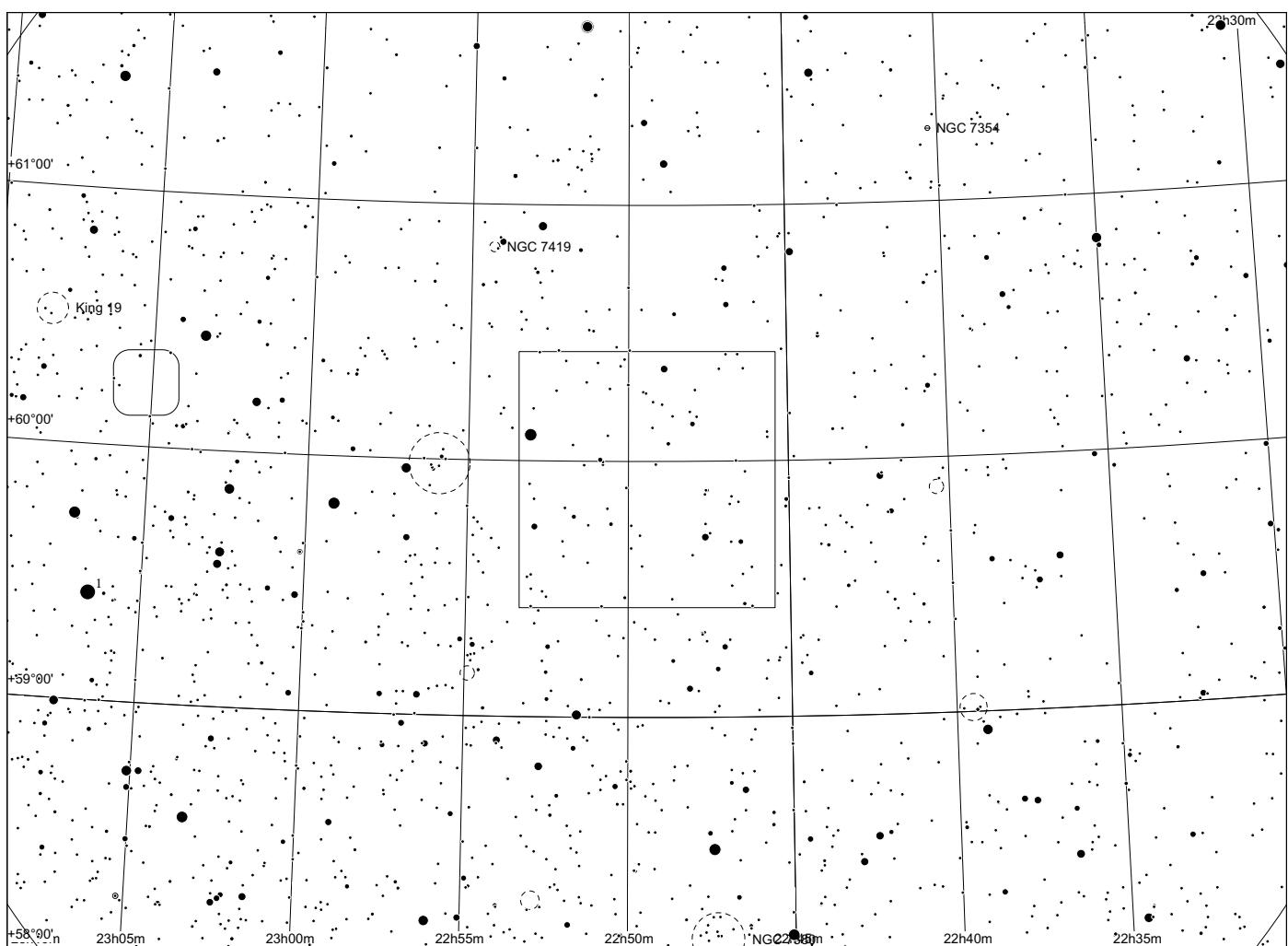
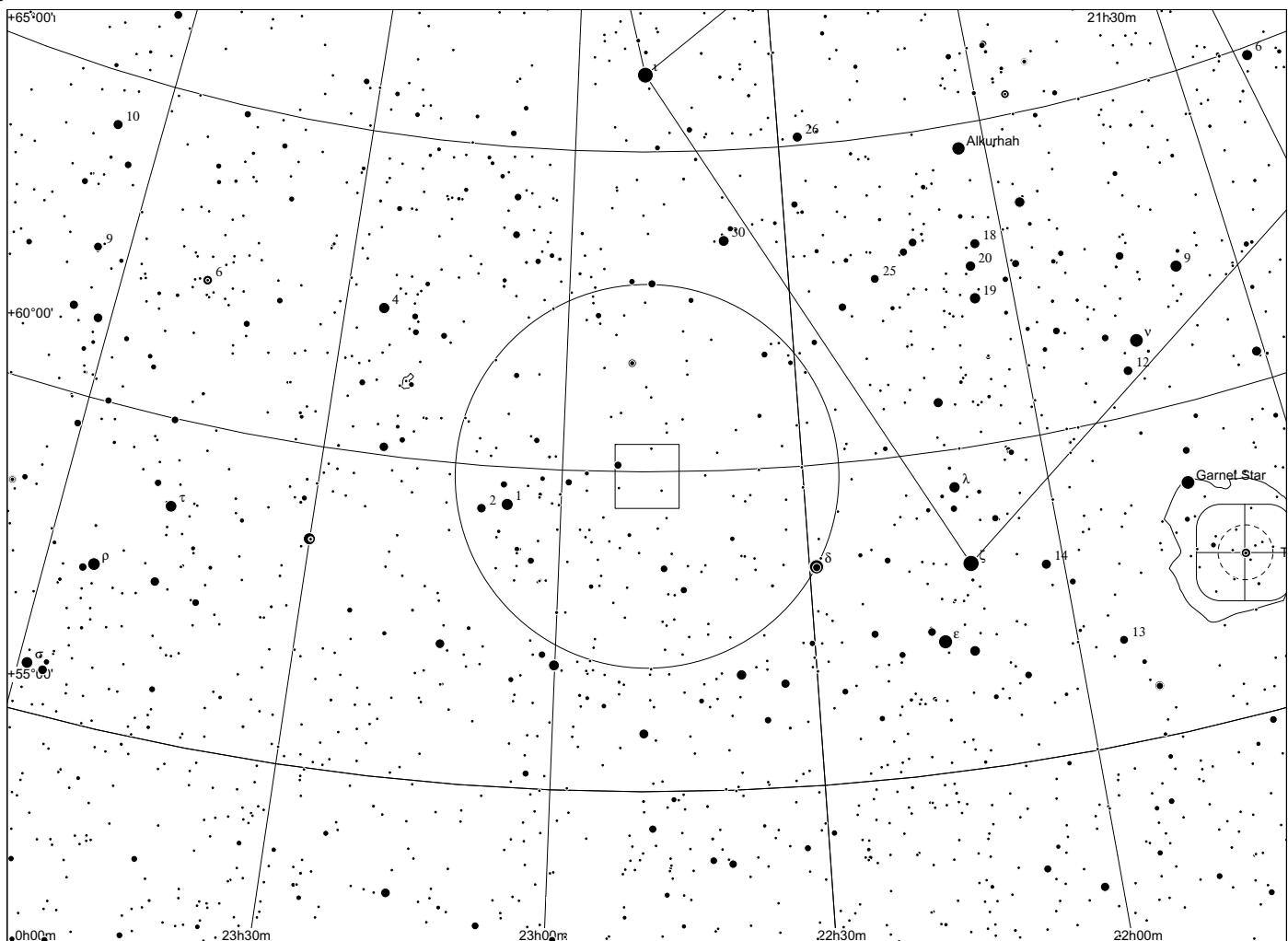
composite

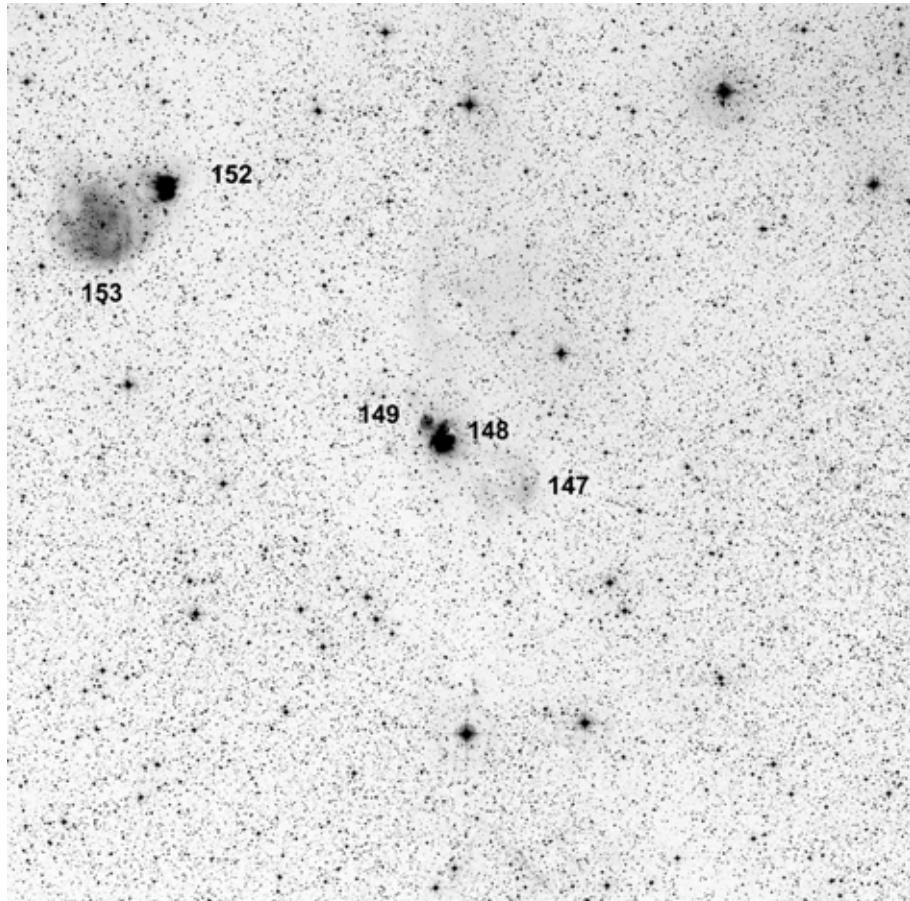
	other name	RA	dec	dia. '	F	S	B
Sh 2-146		22 49 25.5	+59 55 45	2	3	2	2

Distance: 5483 pc, Size: 5.9 pc, Source: 2003A&A...397..213P

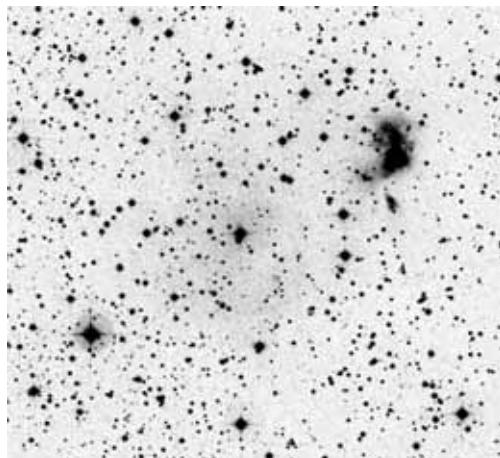
This HII region is split in half by a dust cloud and is excited by a highly obscured O7 star.

Observing notes:

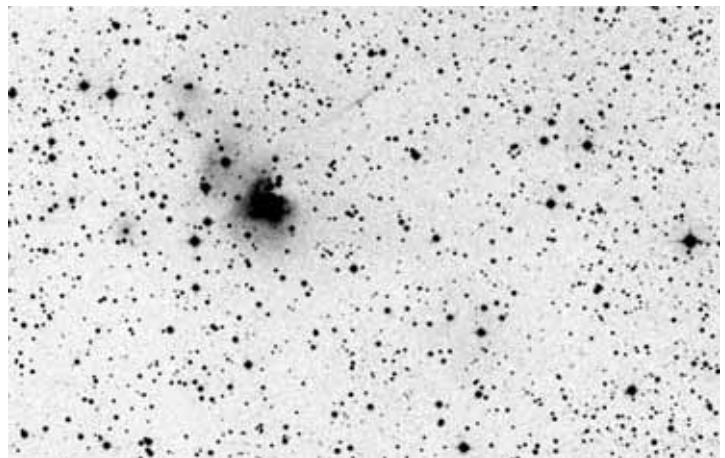




**Sh 2 - 147/148/149
/152/153
in Cepheus**



POSS blue 153/152



149/148

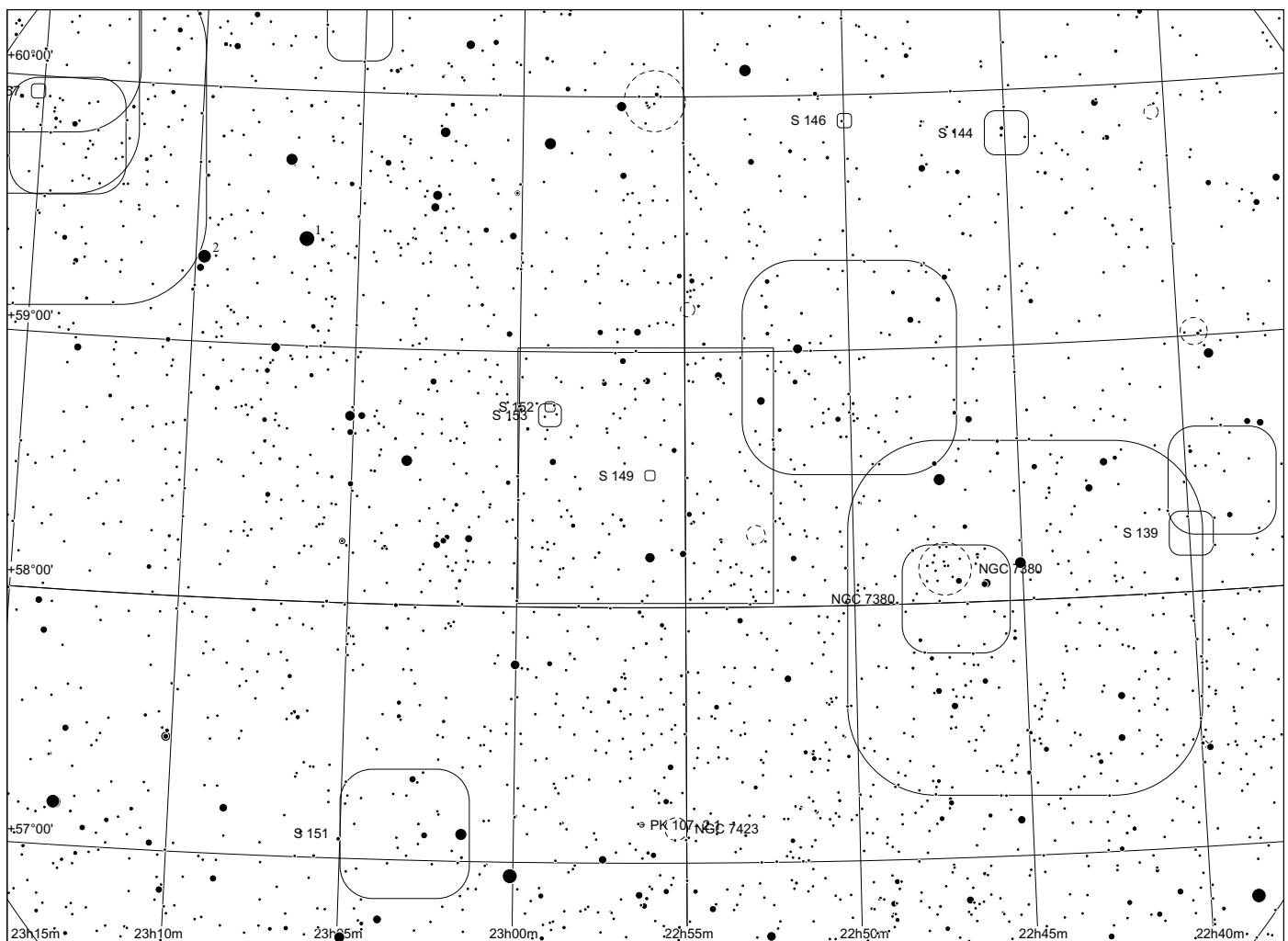
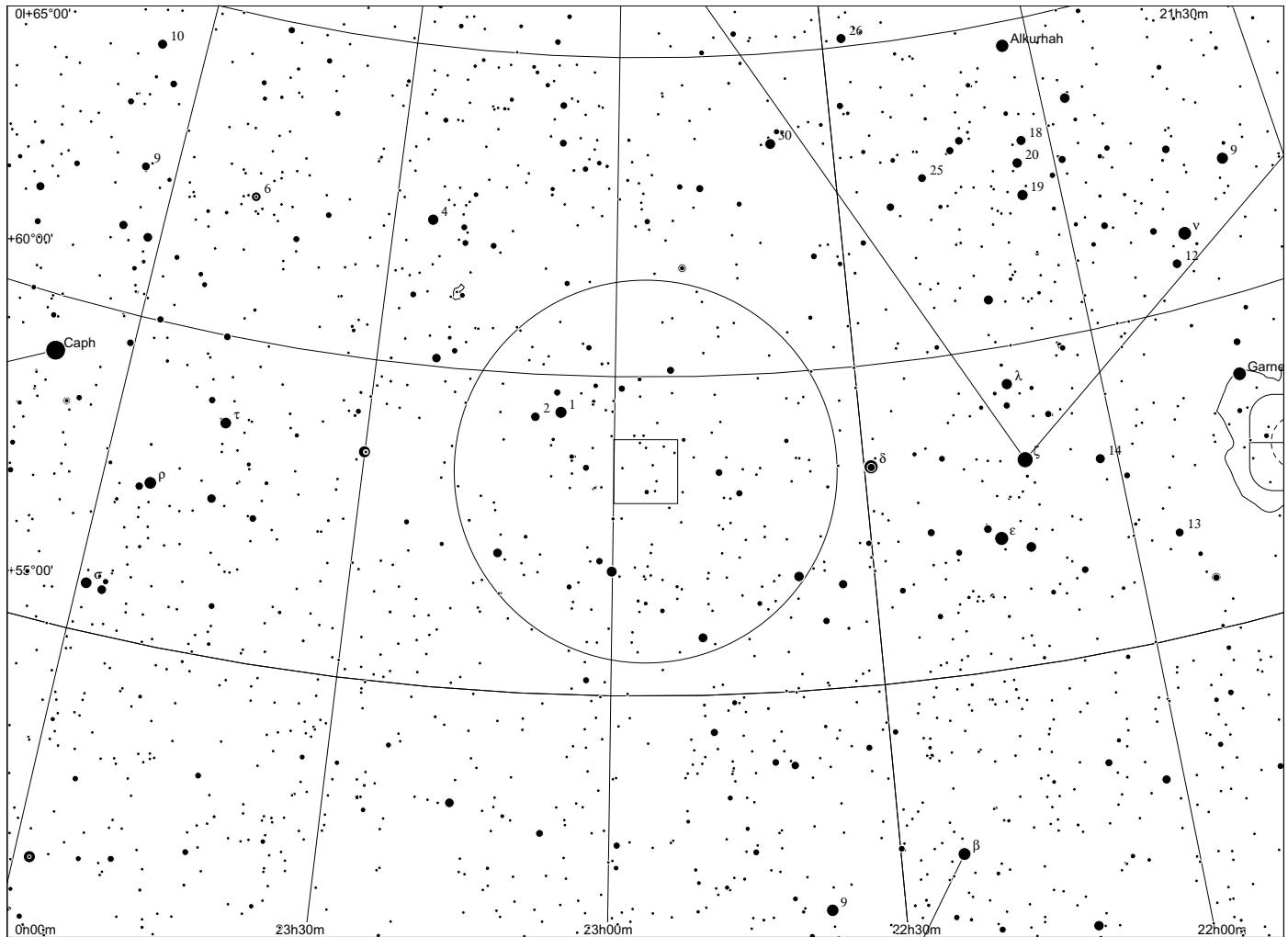
147

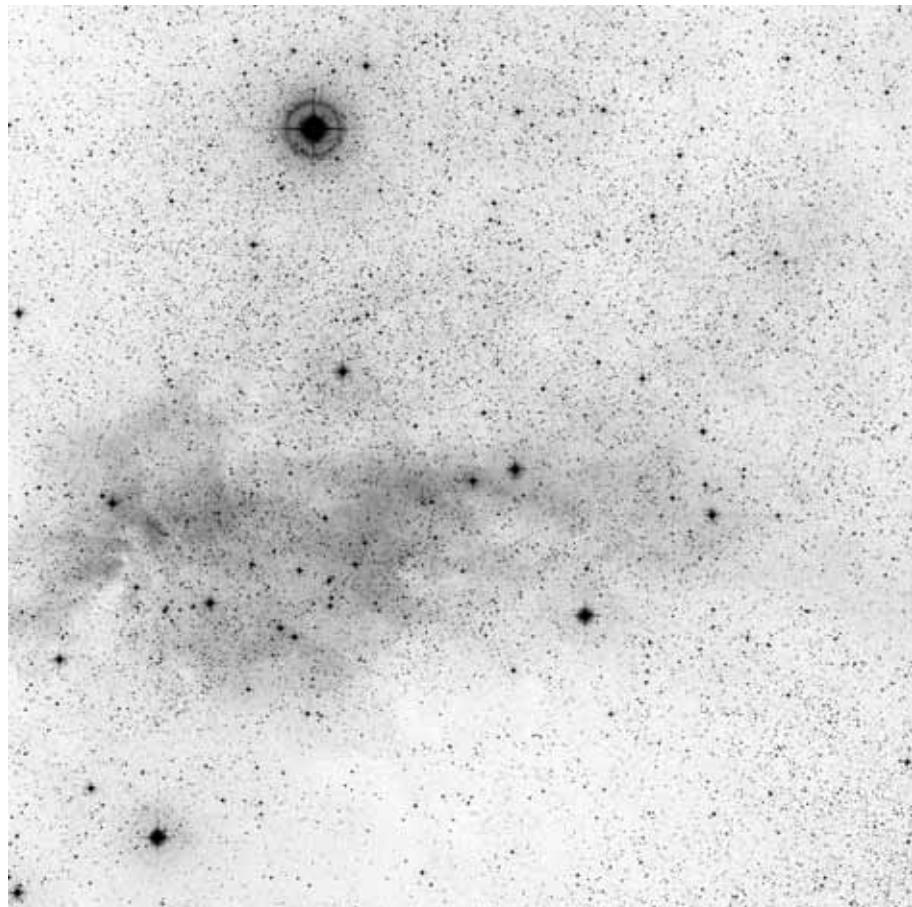
	other name	RA	dec	dia. '	F	S	B
Sh 2-147		22 55 29.2	+58 28 01	2	1	1	1
Sh 2-148		22 56 11.4	+58 31 02	2	3	2	3
Sh 2-149		22 56 23.5	+58 32 03	1	1	1	2
Sh 2-152		22 58 37.2	+58 47 08	2	3	2	3
Sh 2-153		22 59 13.6	+58 44 10	5	1	2	2

Distance: 5300 pc, Source: 2003A&A...397..133R

Sh 2-147, Sh 2-148, Sh 2-149, Sh 2-152 and Sh 2-153 are all parts of the same giant molecular cloud located at a distance of about 4500 pc.

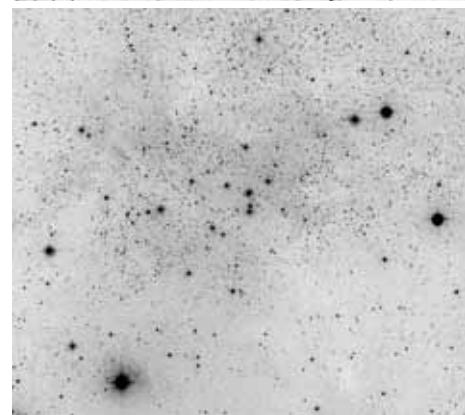
Observing notes:



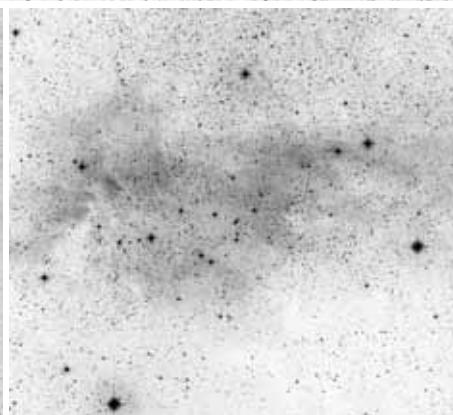


**Sh 2 - 154
in Cepheus**

60x60, red



POSS blue



POSS red

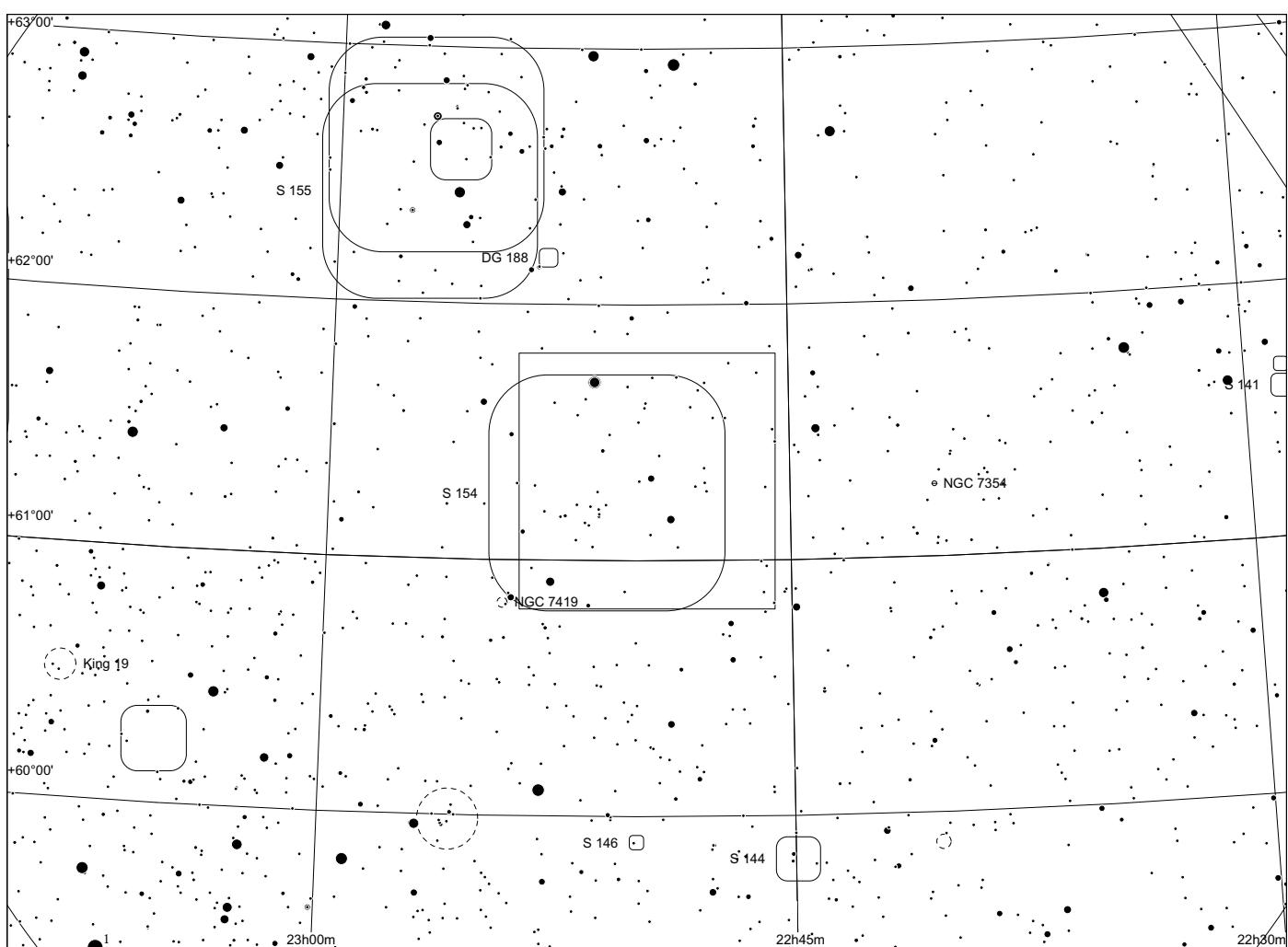
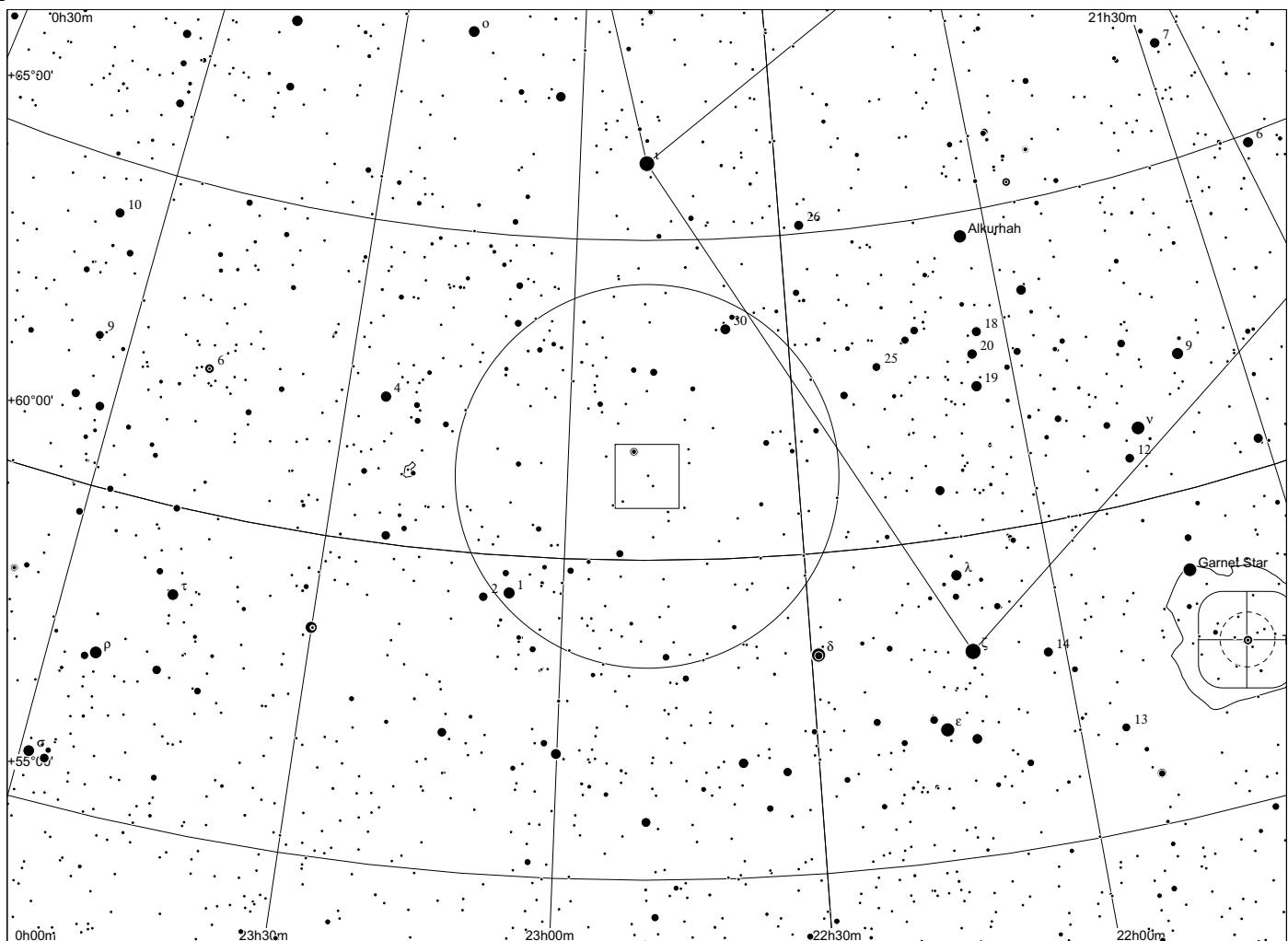


composite

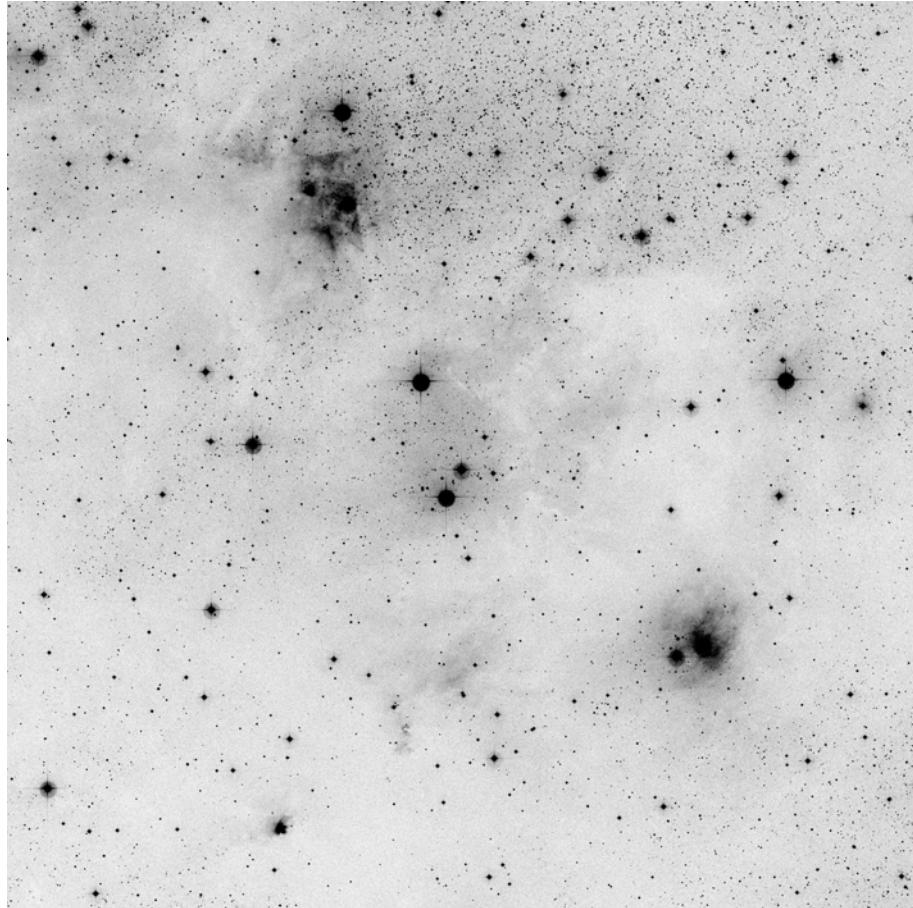
	other name	RA	dec	dia. '	F	S	B
Sh 2-154		22 51 24.6	+61 10 50	60	3	2	2

Distance: 1000 pc, Size: 17.5 pc, Source: 2000ApJ...537..221U

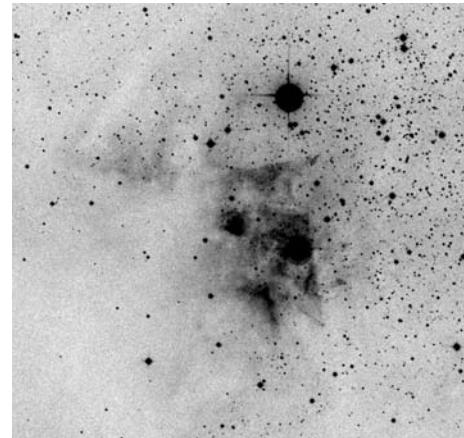
Observing notes:



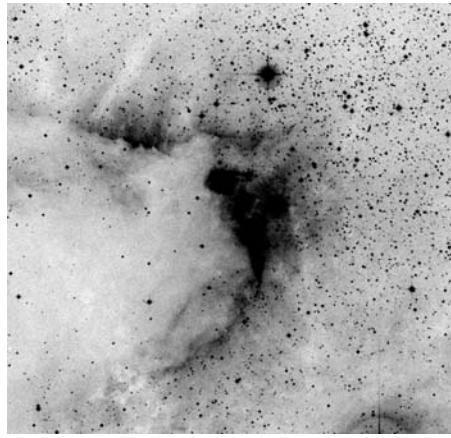
Sh 2 - 155
in Cepheus



60x60, red



POSS blue



POSS red



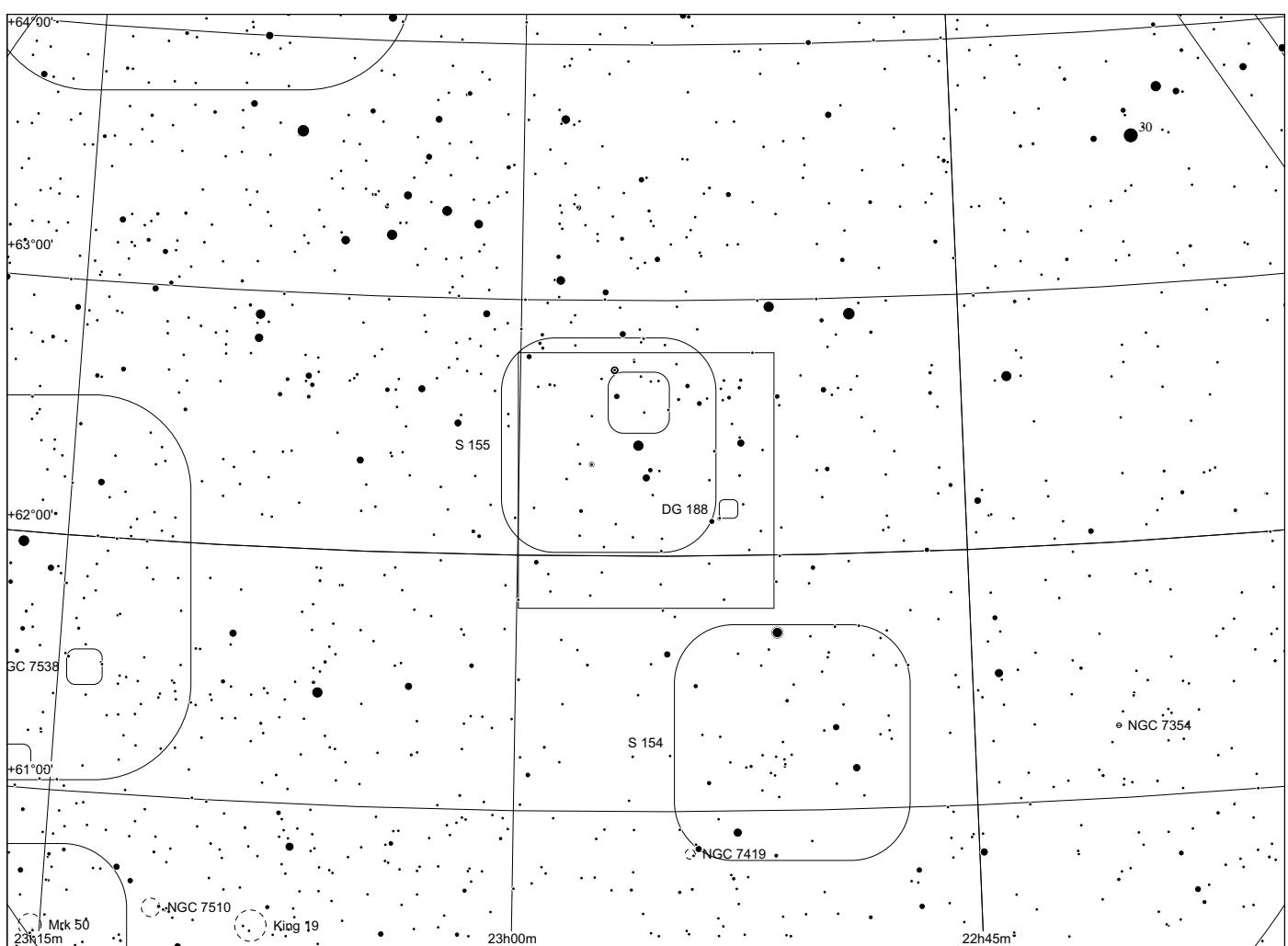
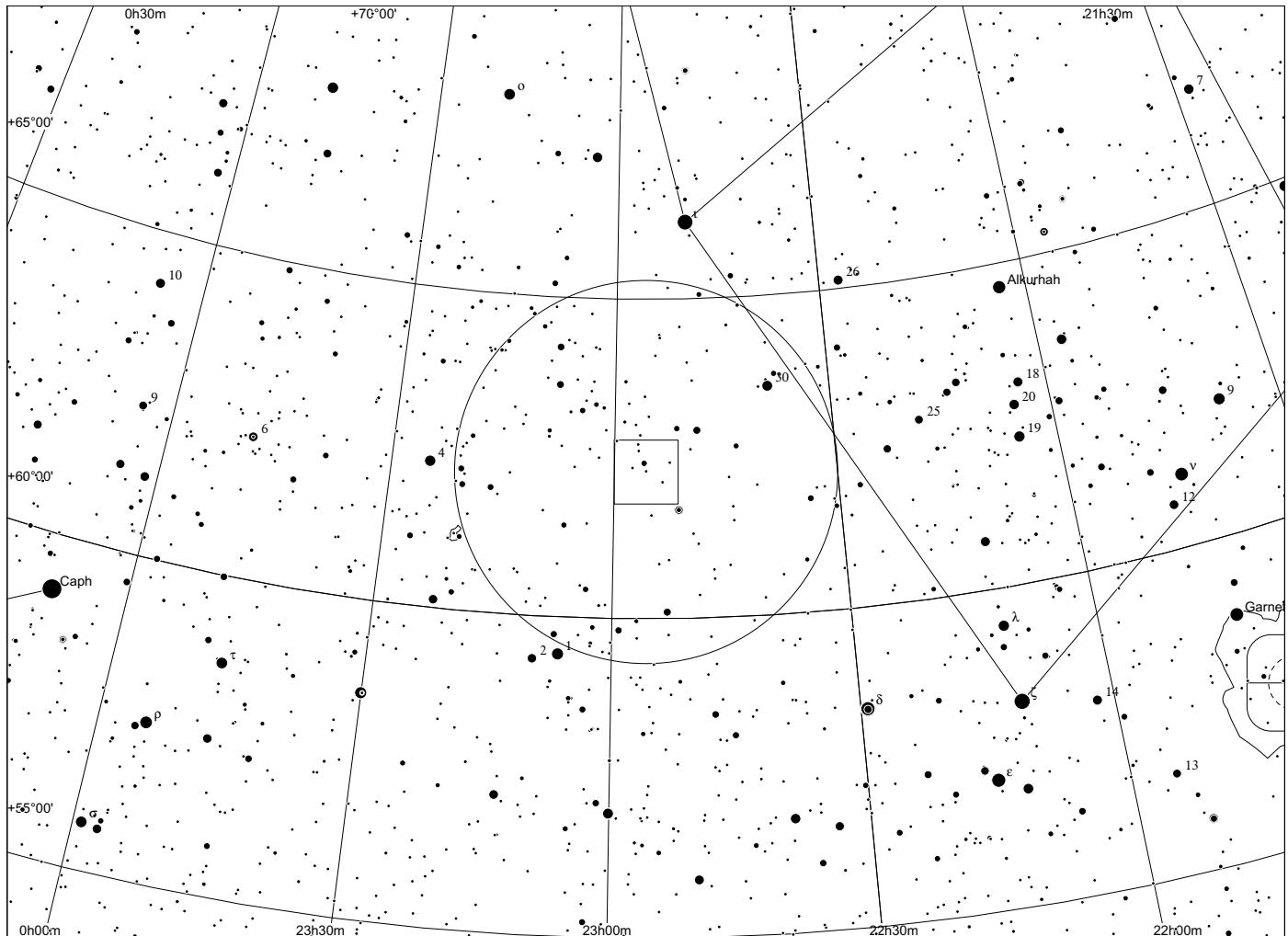
composite

	other name	RA	dec	dia. '	F	S	B
Sh 2-155	Cave Nebula	22 56 43.2	+62 37 04	60	3	2	2

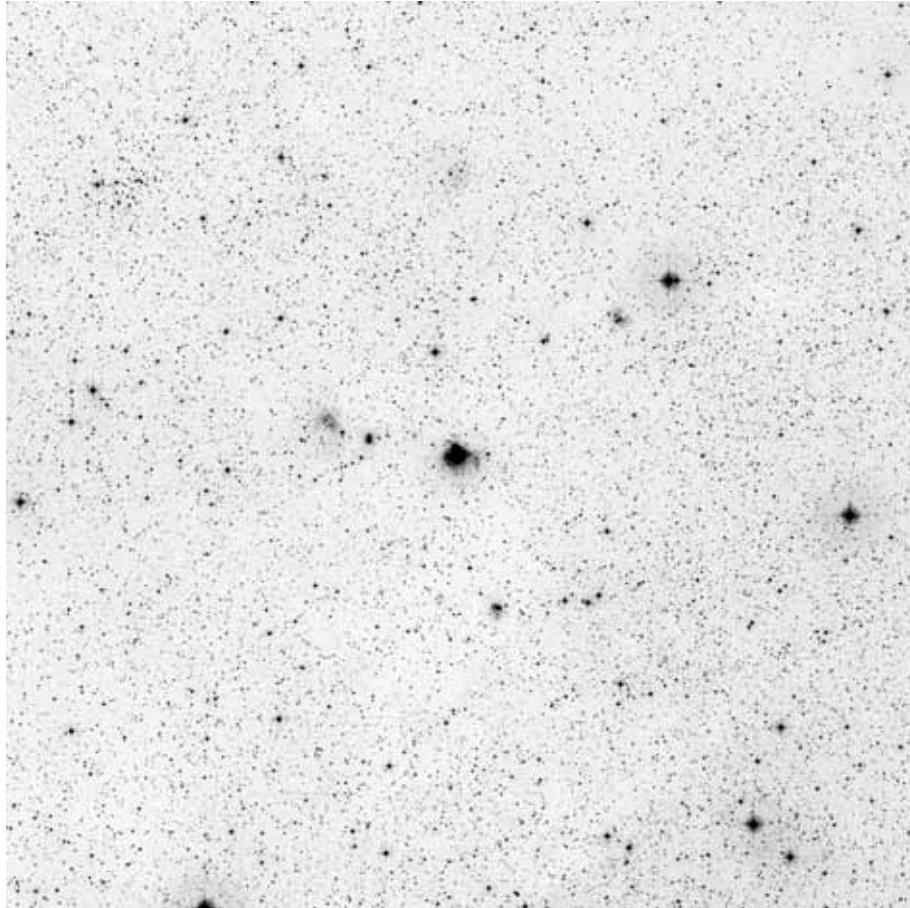
Distance: 730 pc, Size: 12.7 pc, Source: 1982ApJS...49..183B

The Cave Nebula interacts with the Cepheus B molecular cloud.

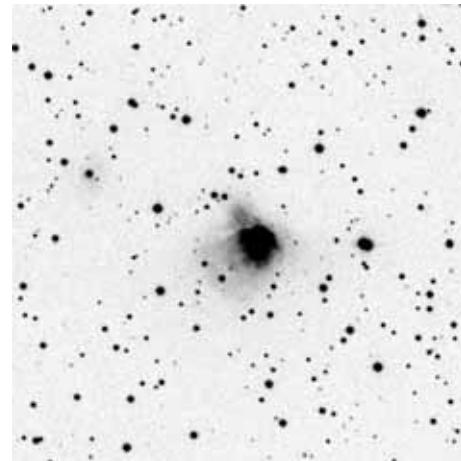
Observing notes:



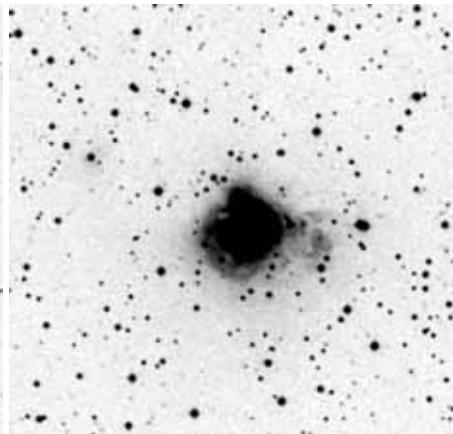
Sh 2 - 156
in Cepheus



60x60, red



POSS blue



POSS red



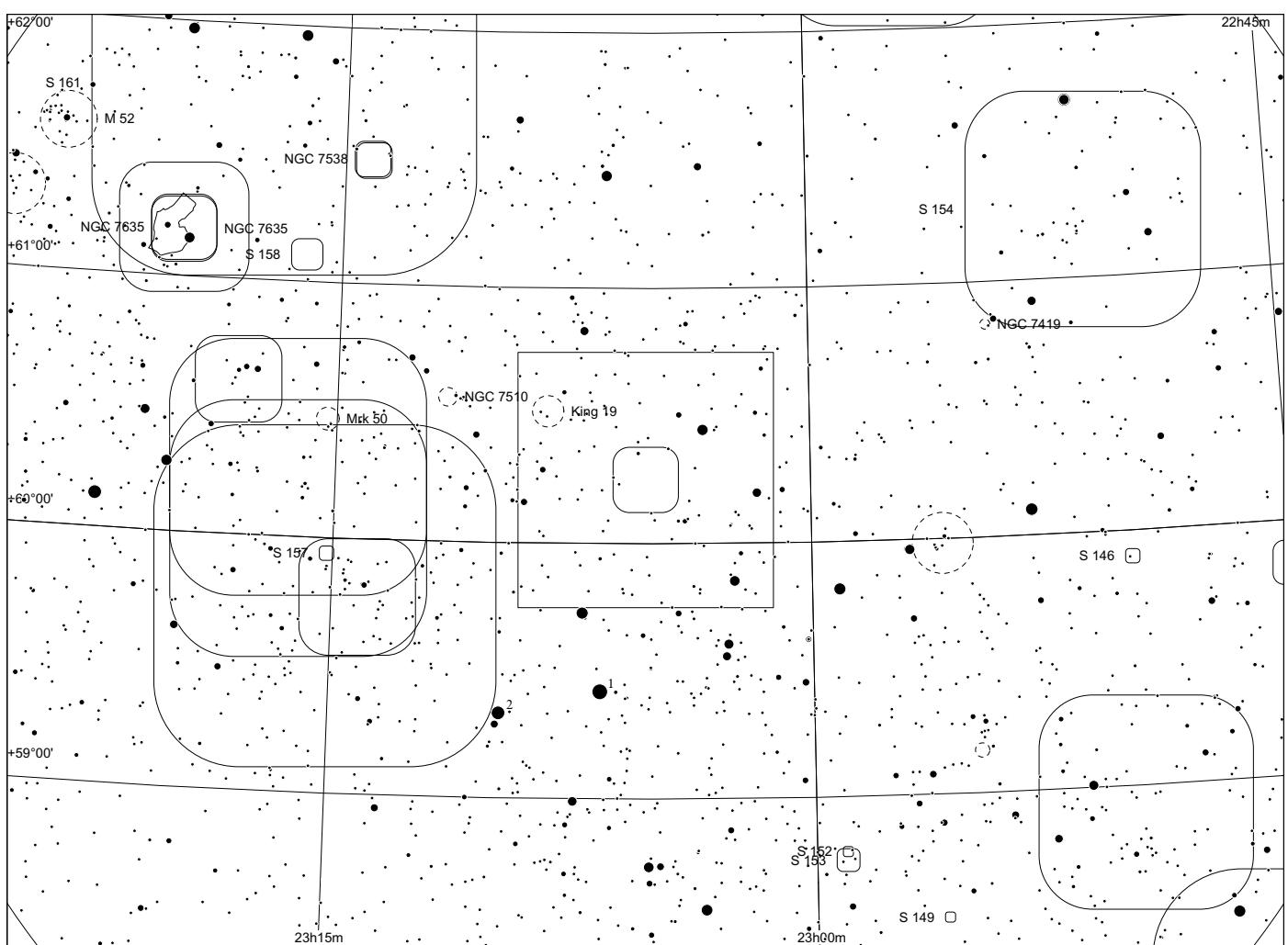
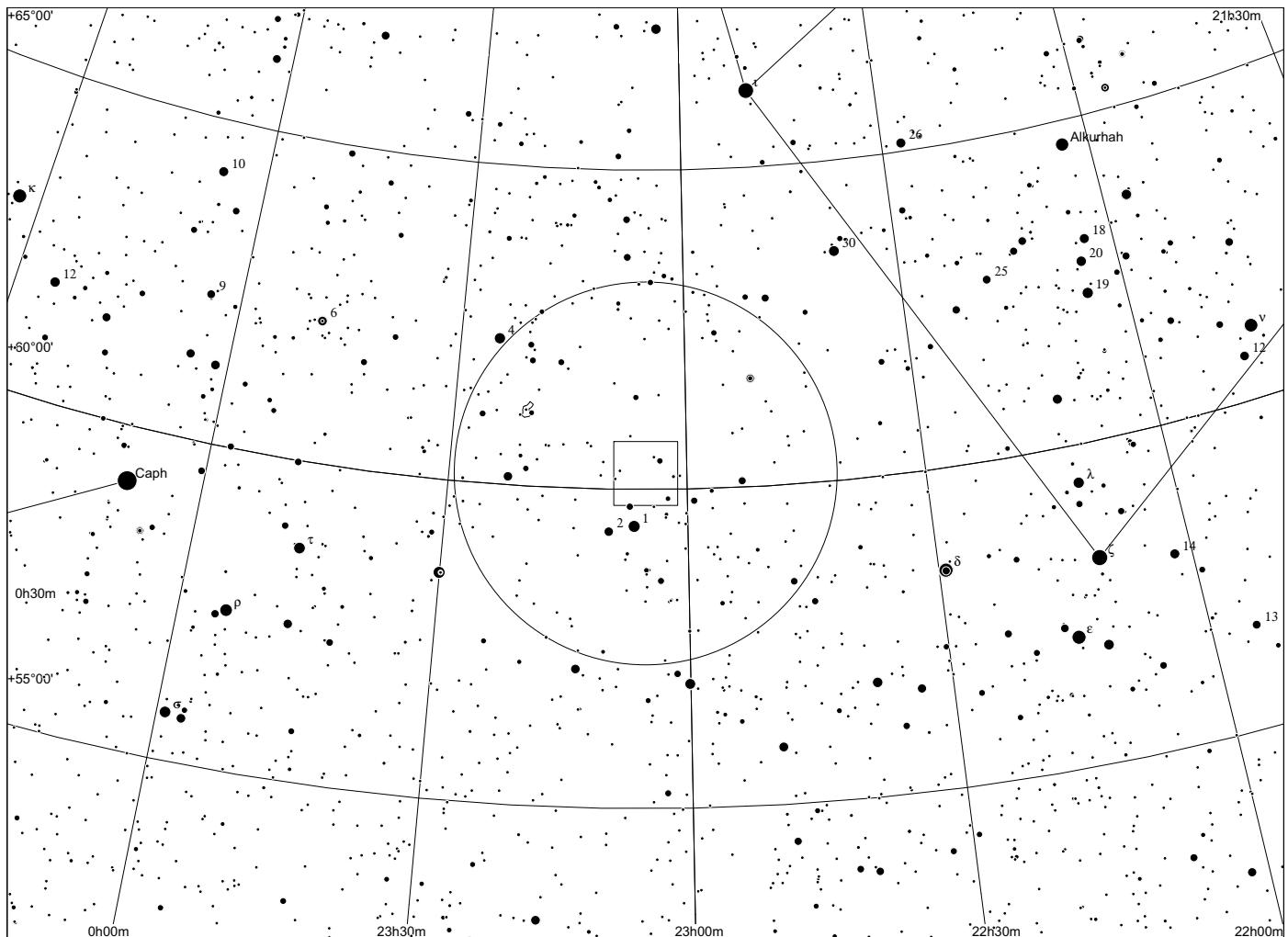
composite

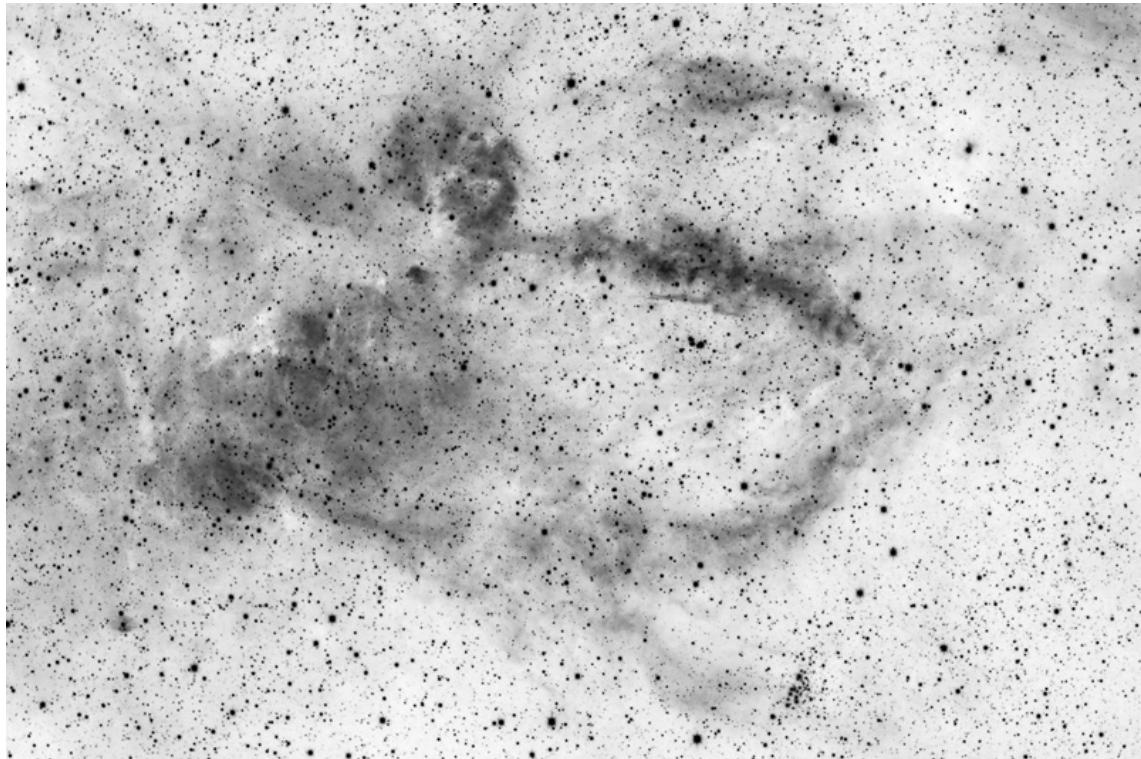
	other name	RA	dec	dia. '	F	S	B
Sh 2-156	IC 1470	23 05 09.6	+60 15 23	2	1	2	3

Distance: 4891 pc, Size: 5.1 pc, Source: 2003A&A...397..213P

Also called IC 1470, this HII region is part of the star cluster NGC 7510. It appears to be ionised by a single O7 class star. The bright core is only one of five distinct and apparently independent emission sources within a giant molecular cloud. The distance is estimated to be about 3500 to 4000 parsecs.

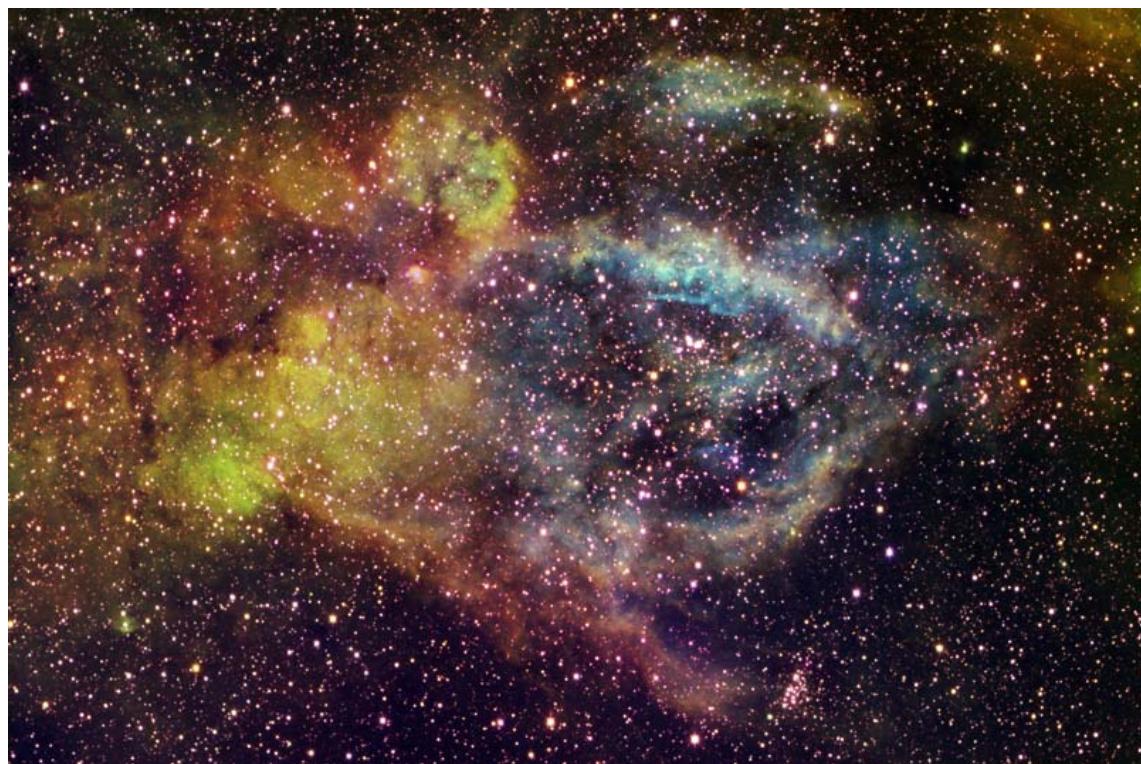
Observing notes:





Sh 2 - 157
in
Cep/Cas

both images are
rotated, north to
the right



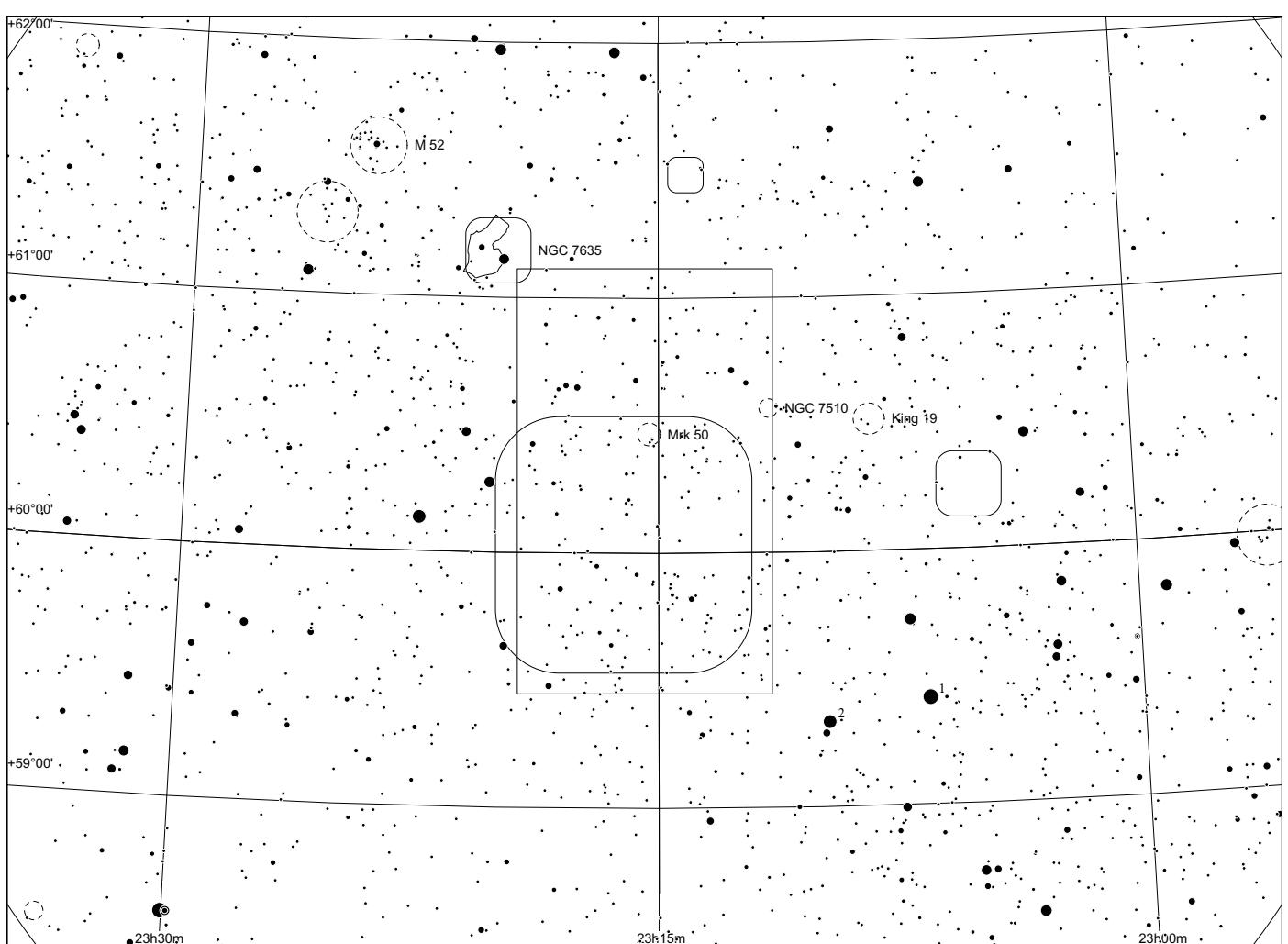
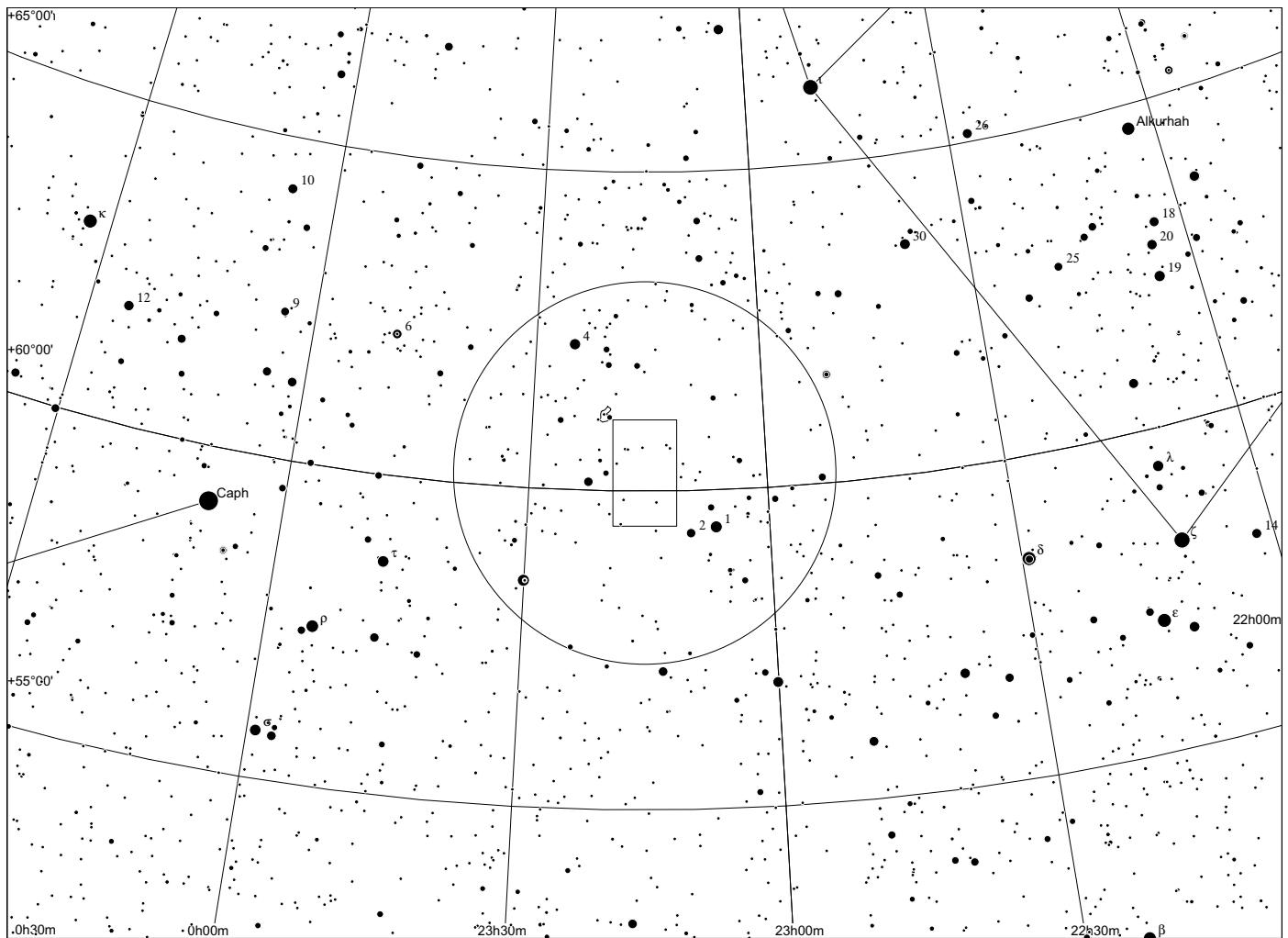
narrowband
Dean Salman

	other name	RA	dec	dia.	F	S	B
Sh 2-157		23 16 03.2	+60 02 44	90	3	3	3

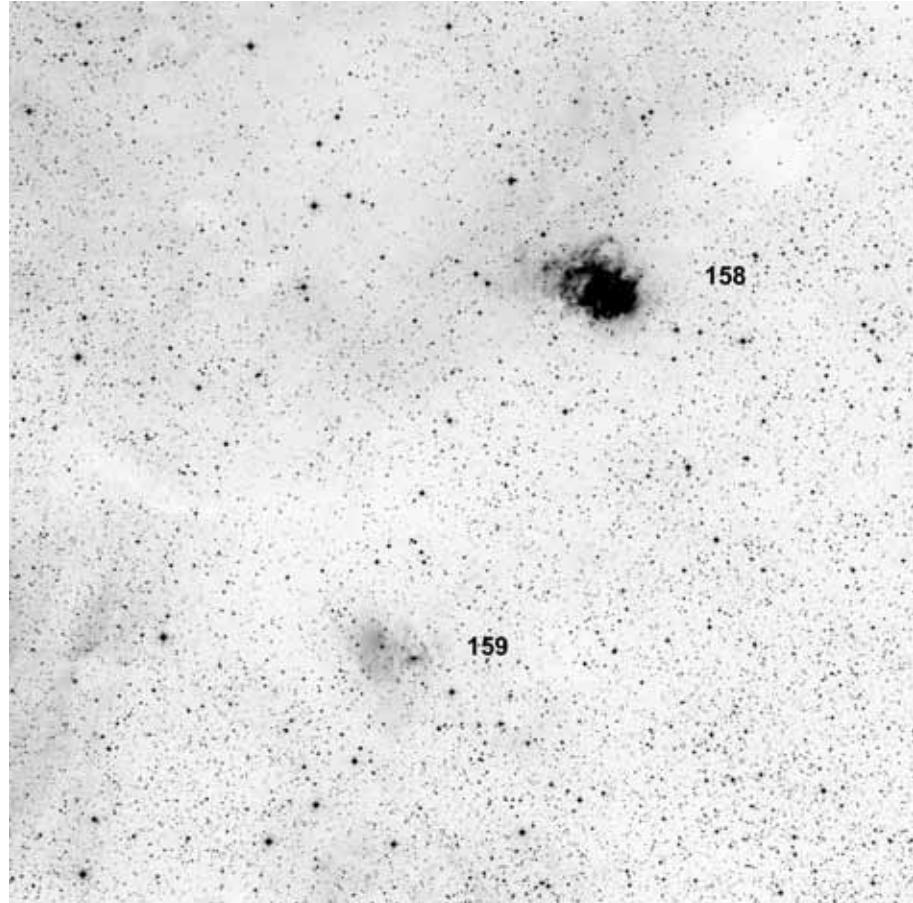
Distance: 2500 pc, Size: 65.5 pc, Source: 1982ApJS...49..183B

This is a ring nebula around WR 157, in the Basel 3 (Markarian 50) cluster that is in turn part of Cas OB2.

Observing notes:



**Sh 2 - 158/159
in Cep/Cas**



60x60, red



POSS blue 158

159

composite

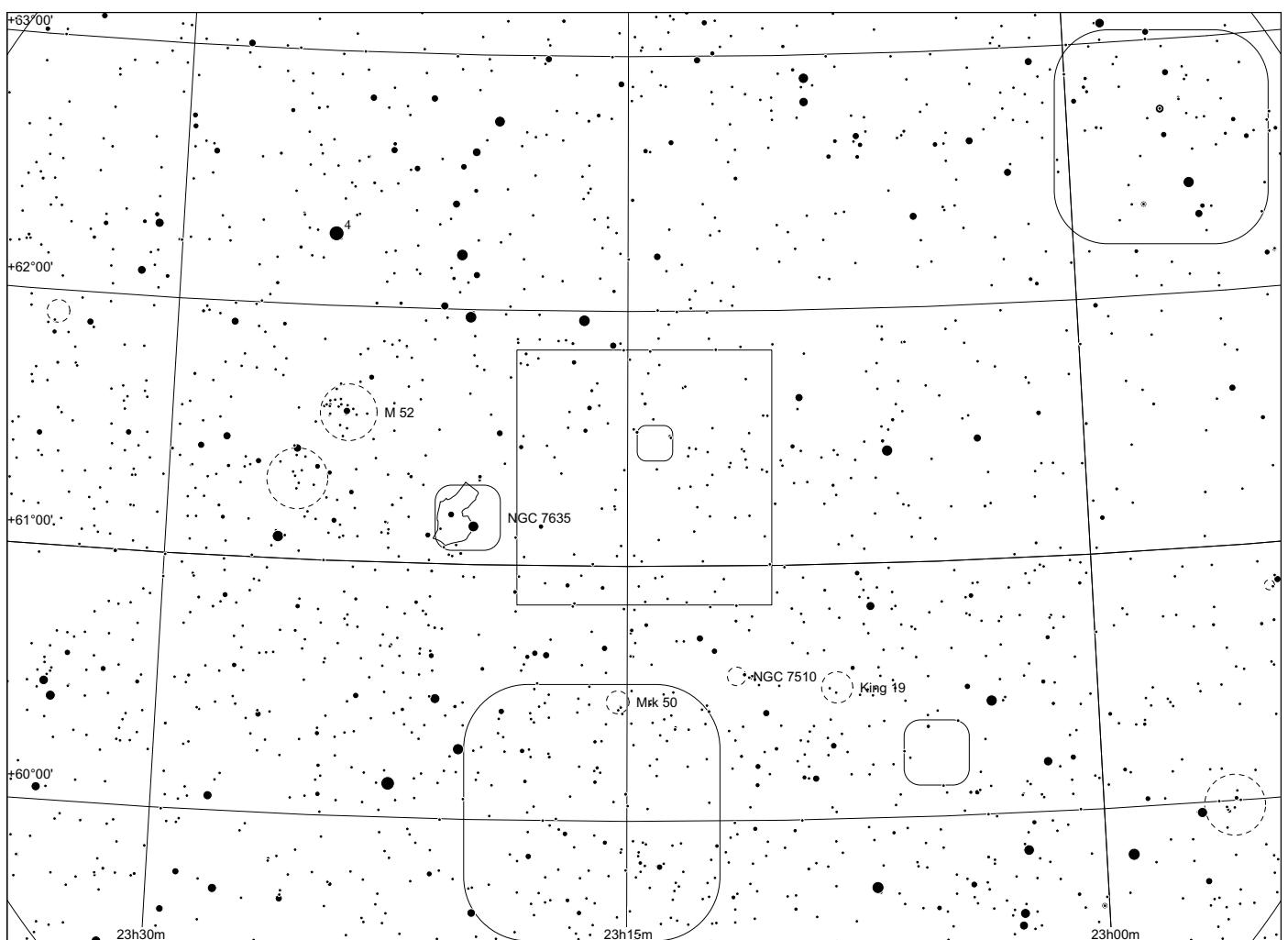
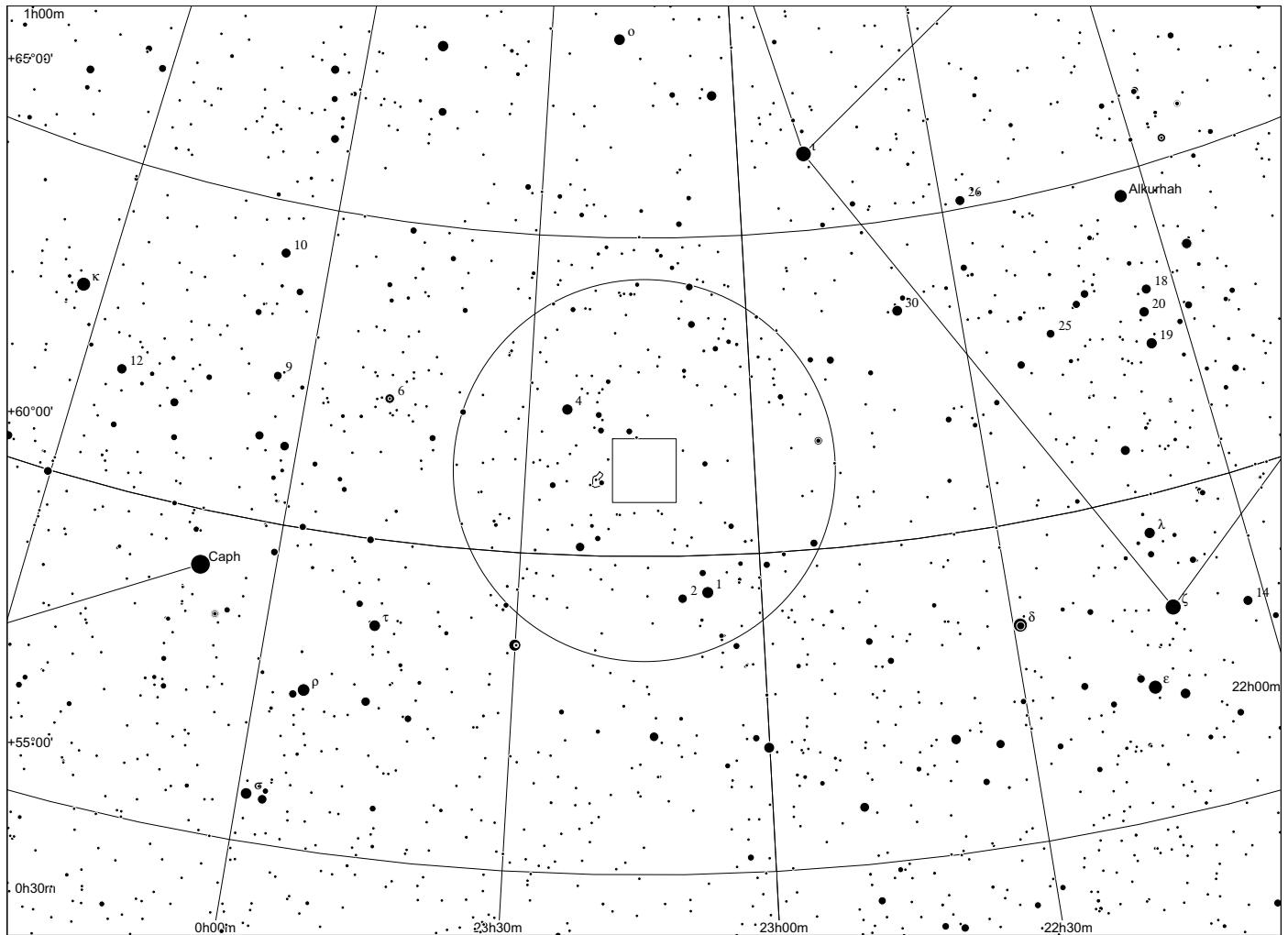
	other name	RA	dec	dia. '	F	S	B
Sh 2-158	NGC7538	23 13 39.6	+61 30 40	10	2	3	3
Sh 2-159		23 15 43.0	+61 08 44	7	3	2	2

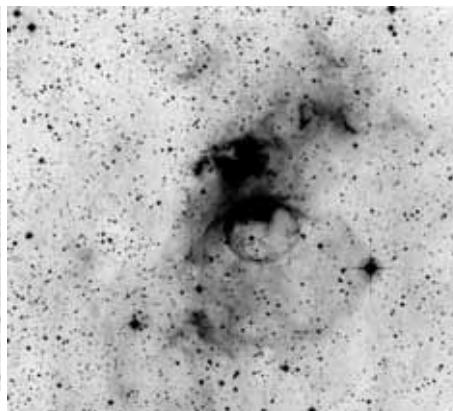
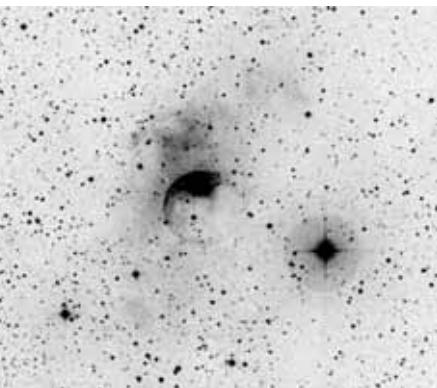
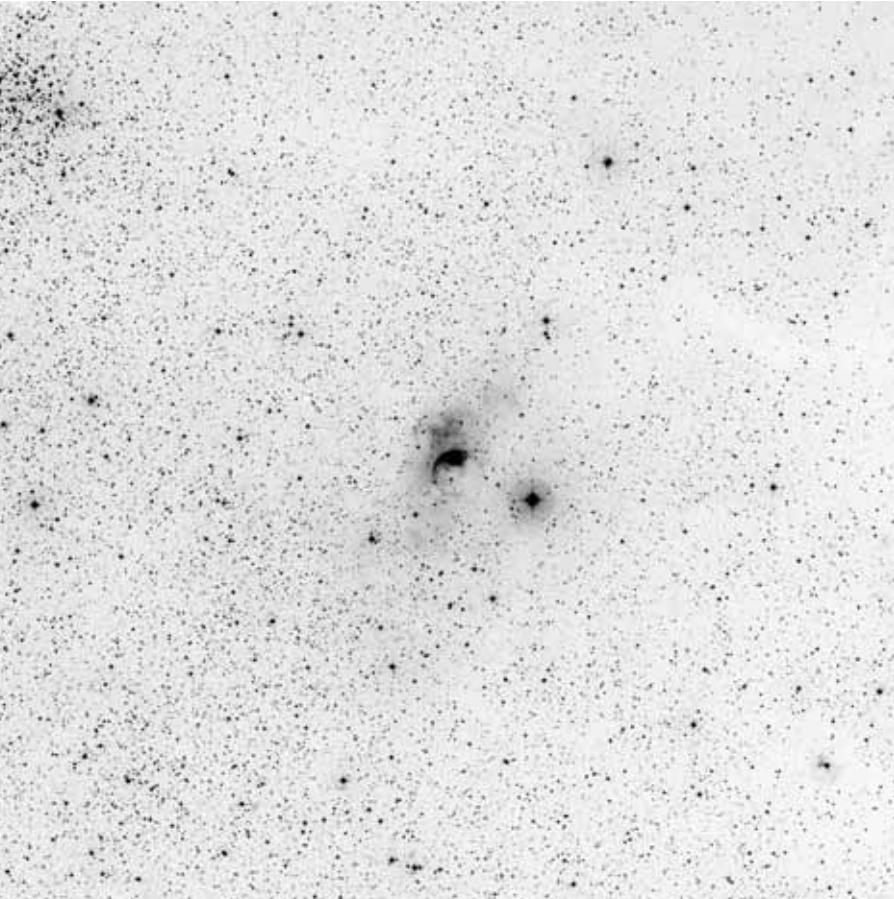
Distance: 2800 pc, Size: 1.3 pc, Source: 2004ApJ...616.1042O

This is NGC 7538, a major star formation region in Cas OB2. It is surrounded by the much larger diffuse nebula Sh 2-161B.

Observing notes:

200





60x60, blue

POSS blue

POSS red

composite

	other name	RA	dec	dia. '	F	S	B
Sh 2-162	NGC7635 = Bubble Nebula	23 20 41.5	+61 11 52	40	3	3	3

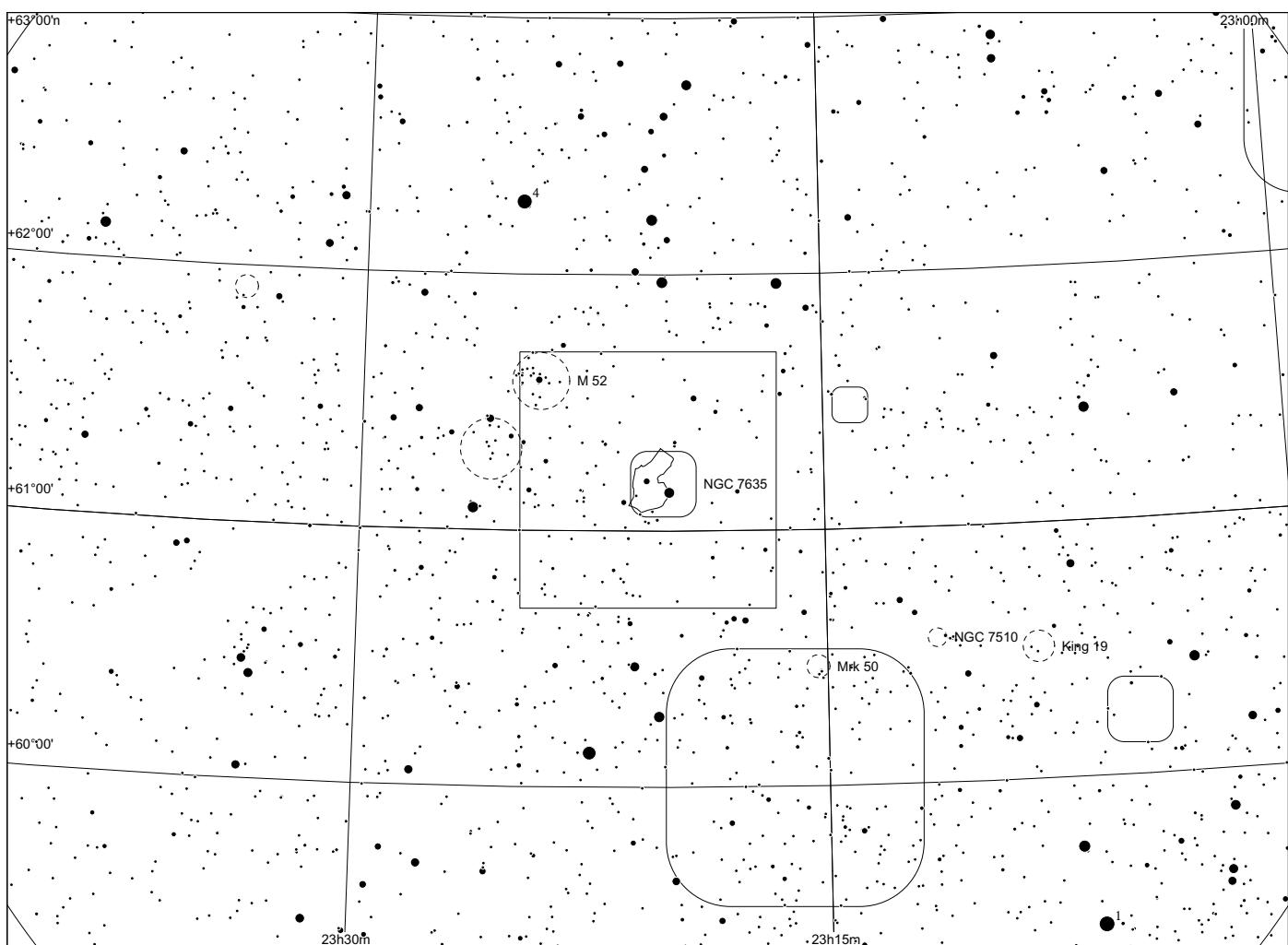
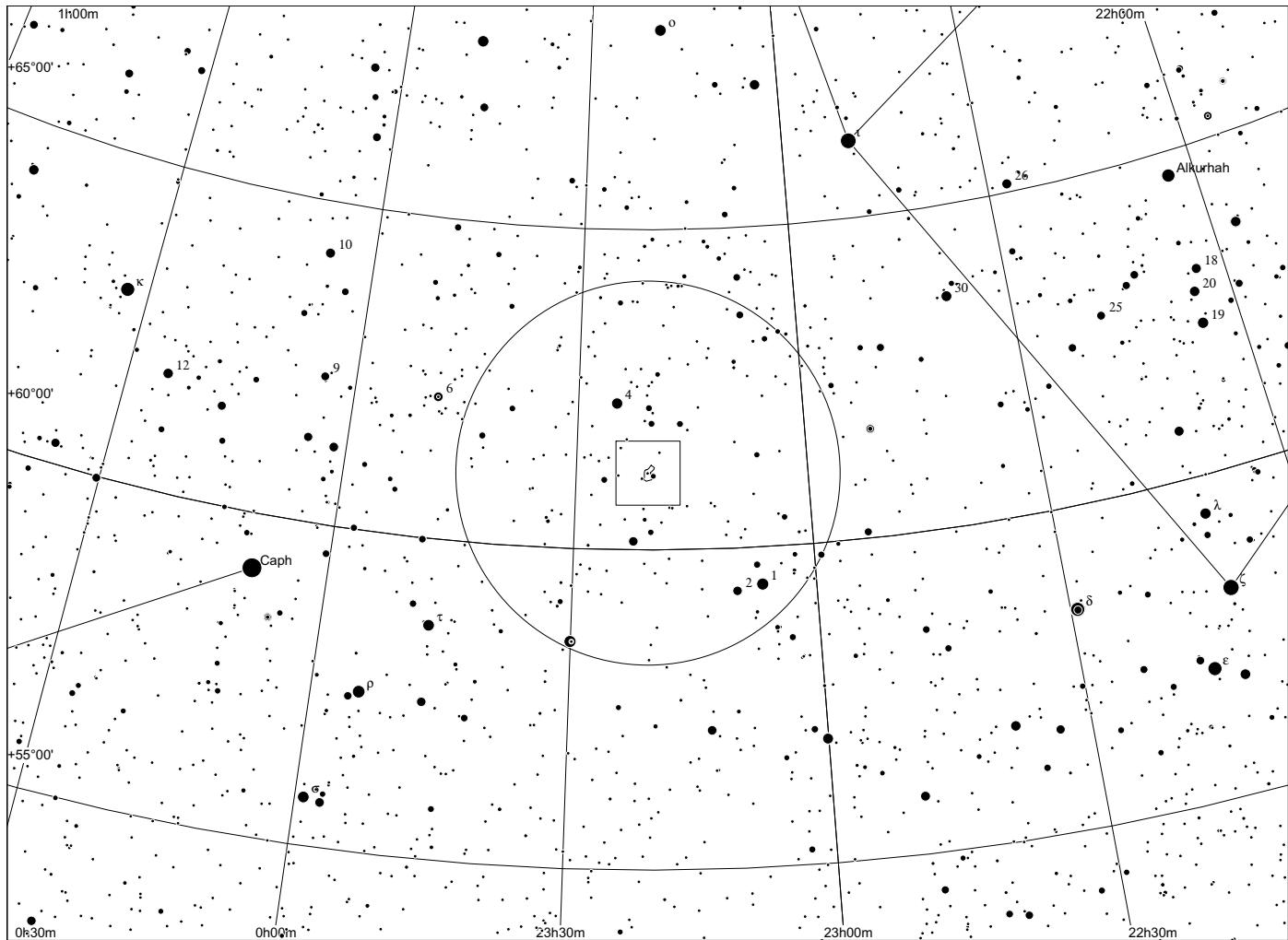
Distance: 3813 pc, Size: 5.8 pc, Source: 2003A&A...397..213P

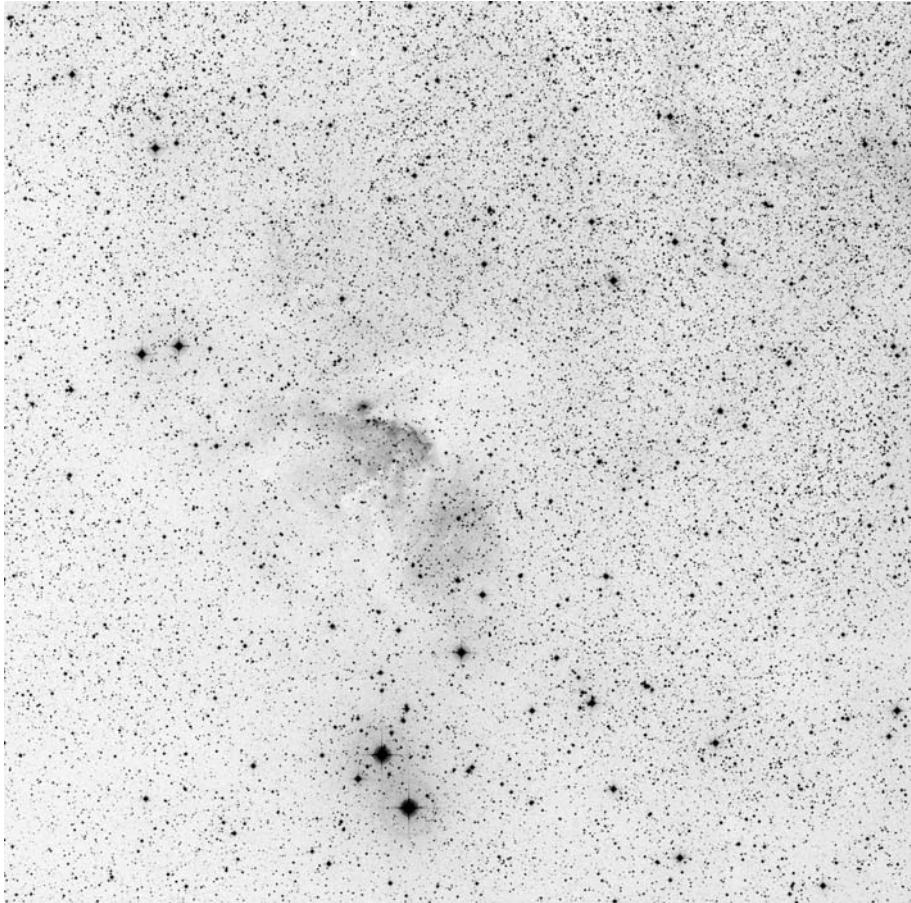
This is the Bubble nebula, NGC 7635, a circular shell around the O6.5 IIIf star BD +60°2522.

A recent study finds the distance to Sh 2-162 to be 2500 parsecs, more in line with its assumed position in the Cas OB2 association.

Observing notes:

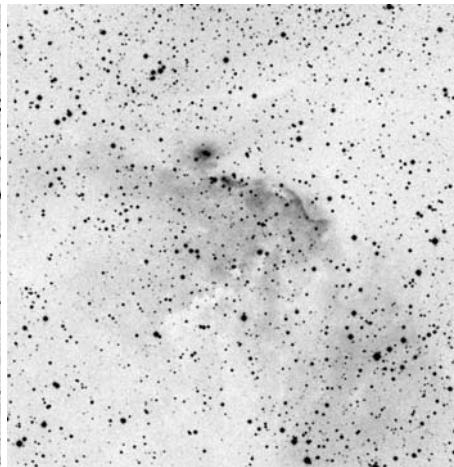
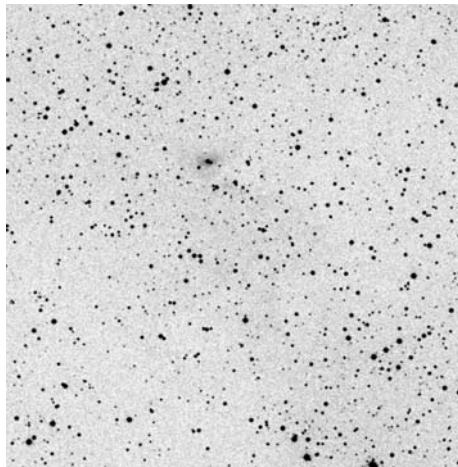
Sh 2 - 162 in Cassiopeia





**Sh 2 - 163
in Cassiopeia**

60x60, red



POSS blue

POSS red

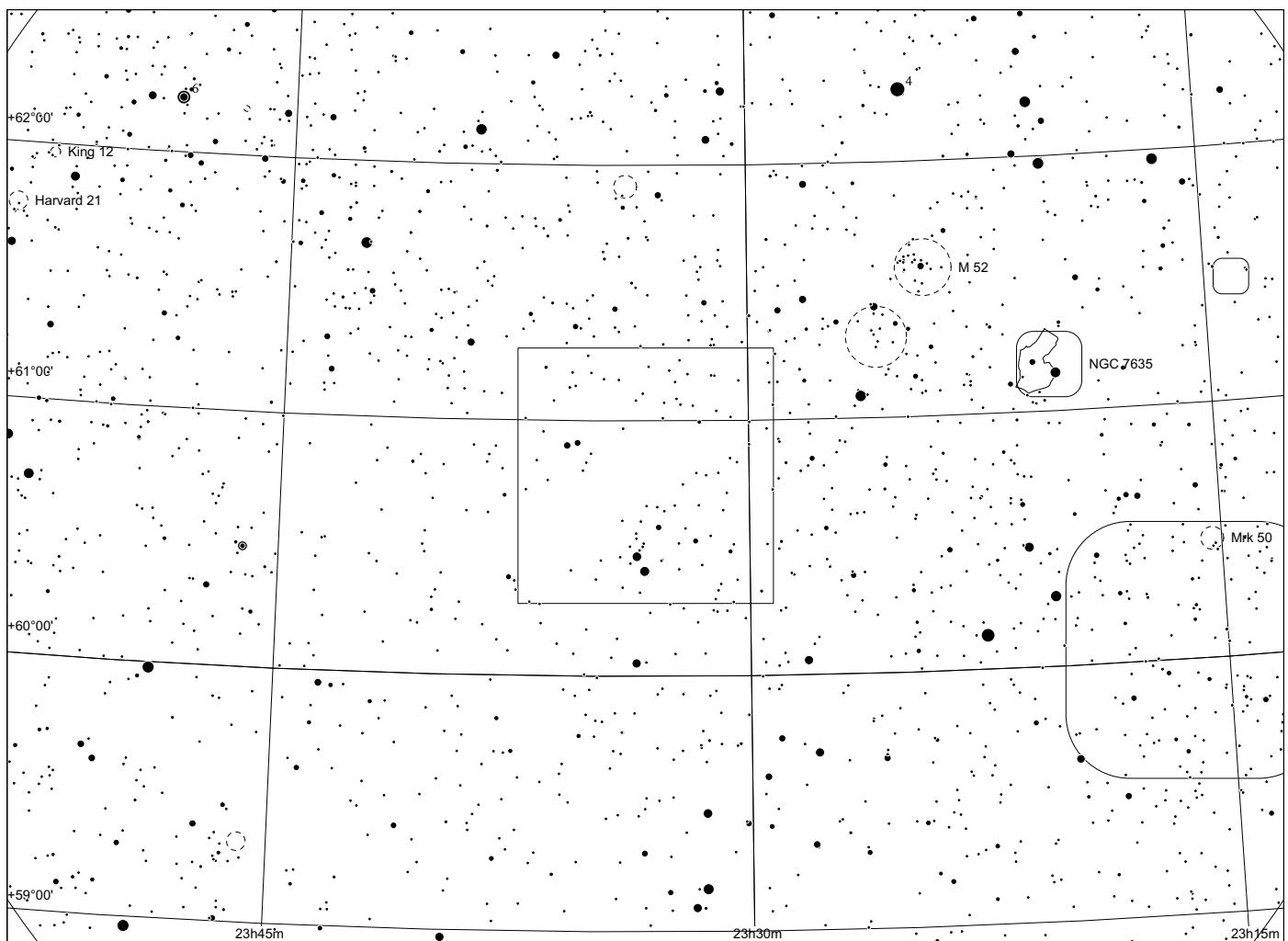
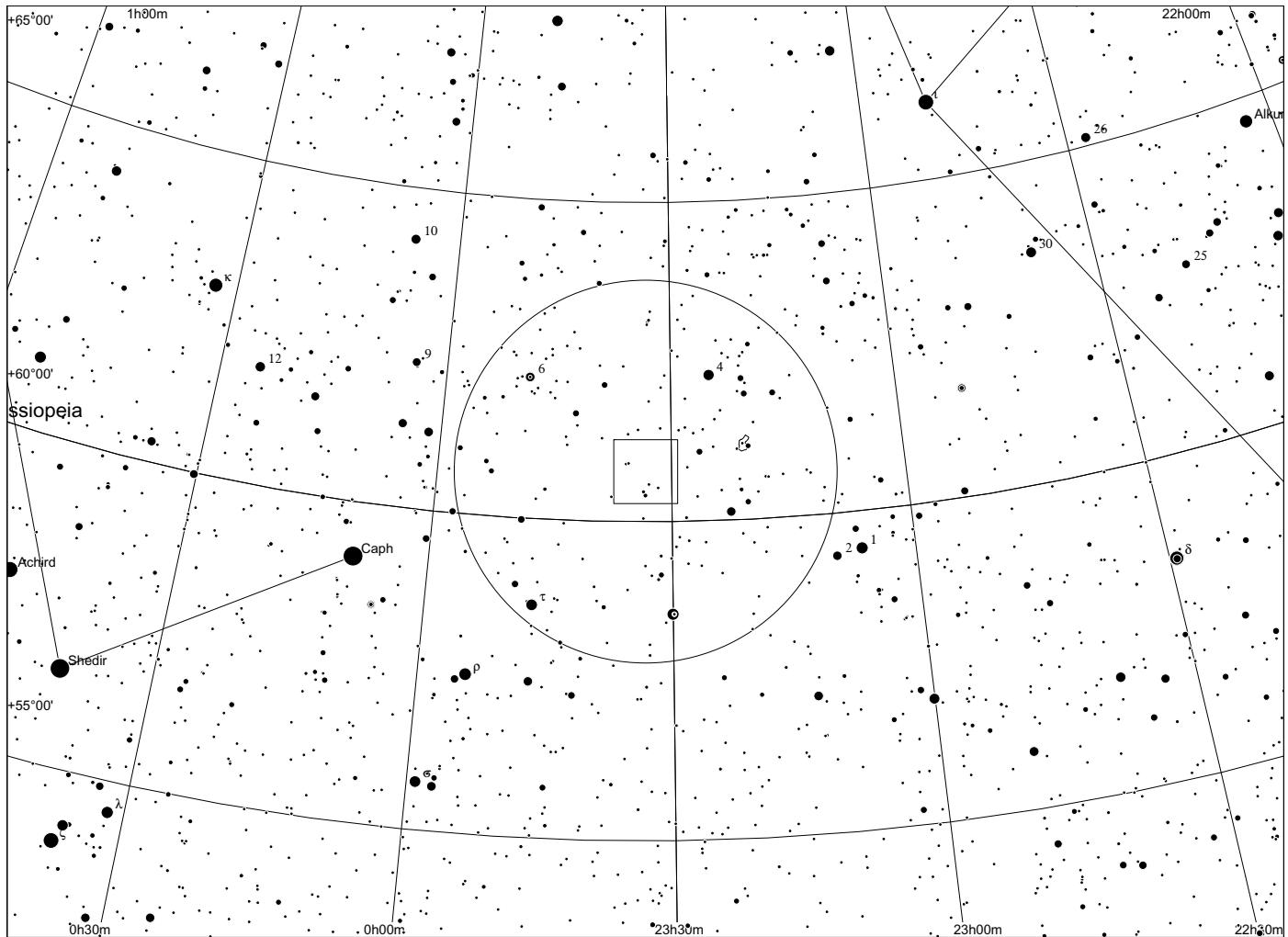
RGB Dean Salman

	other name	RA	dec	dia. '	F	S	B
Sh 2-163		23 33 19.3	+60 47 09	10	3	2	2

Distance: 3839 pc, Size: 12.4 pc, Source: 2003A&A...397..213P

Ionised by the O 9.5 V class star LSI +60 8 at 2800 parsecs and contains the infrared cluster [BDS2003] 45. A second distance estimate of 2500 parsecs.

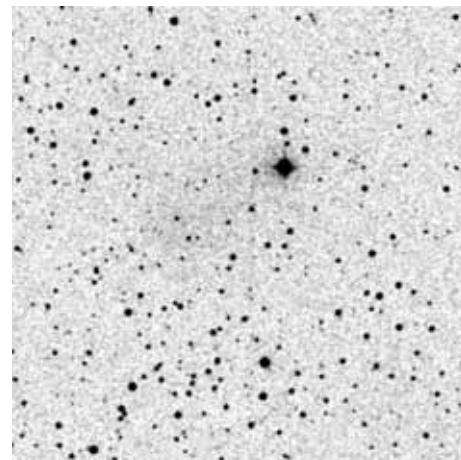
Observing notes:



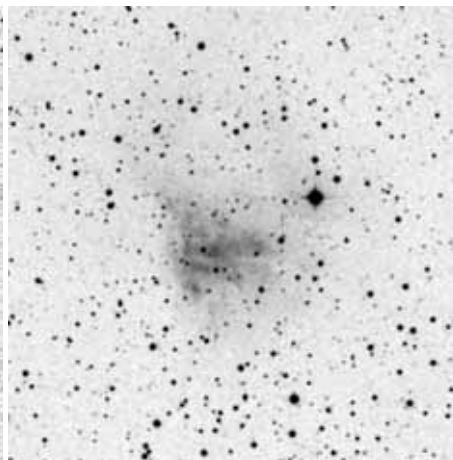


**Sh 2 - 164
in Cassiopeia**

60x60, red



POSS blue



POSS red



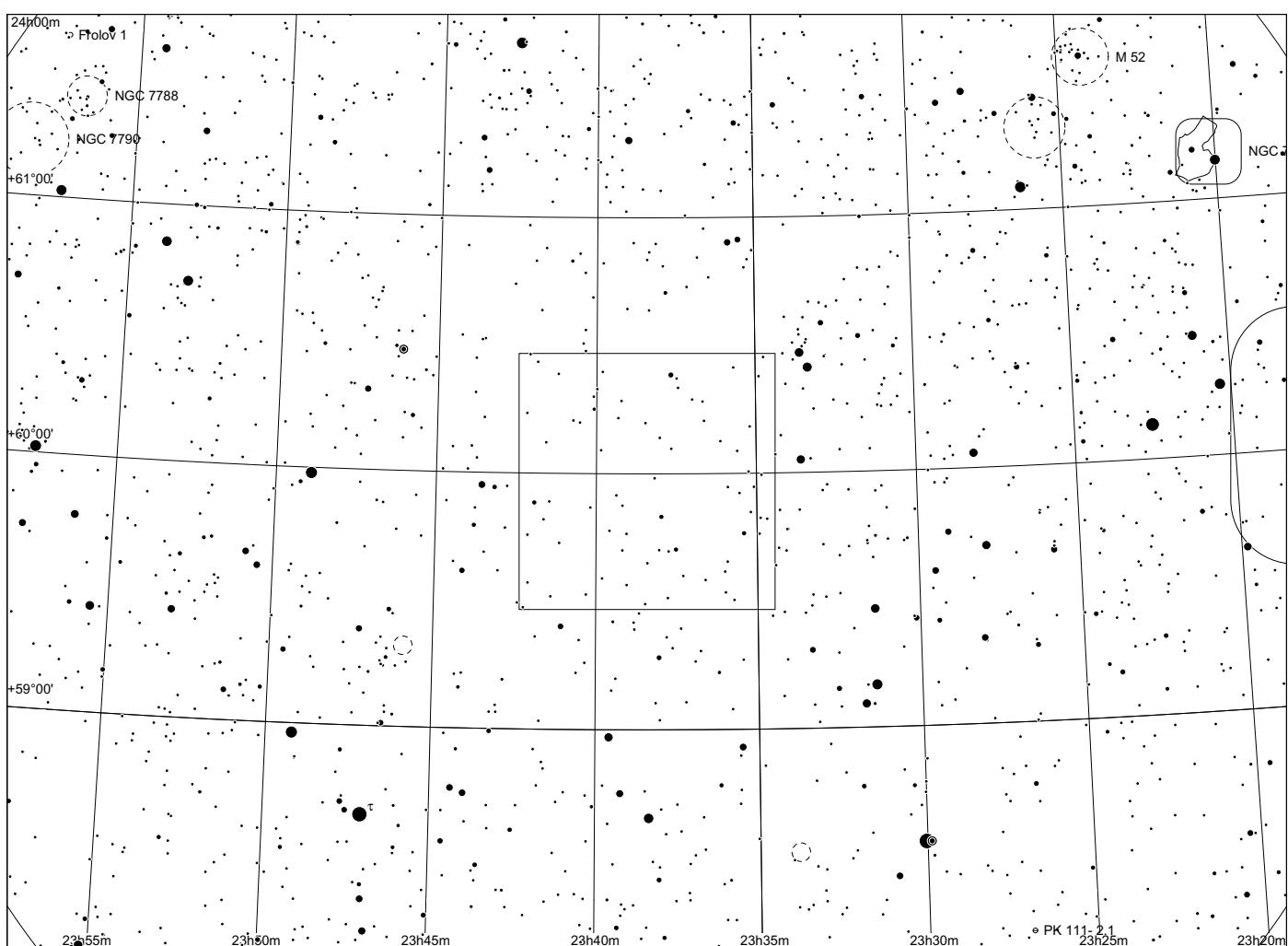
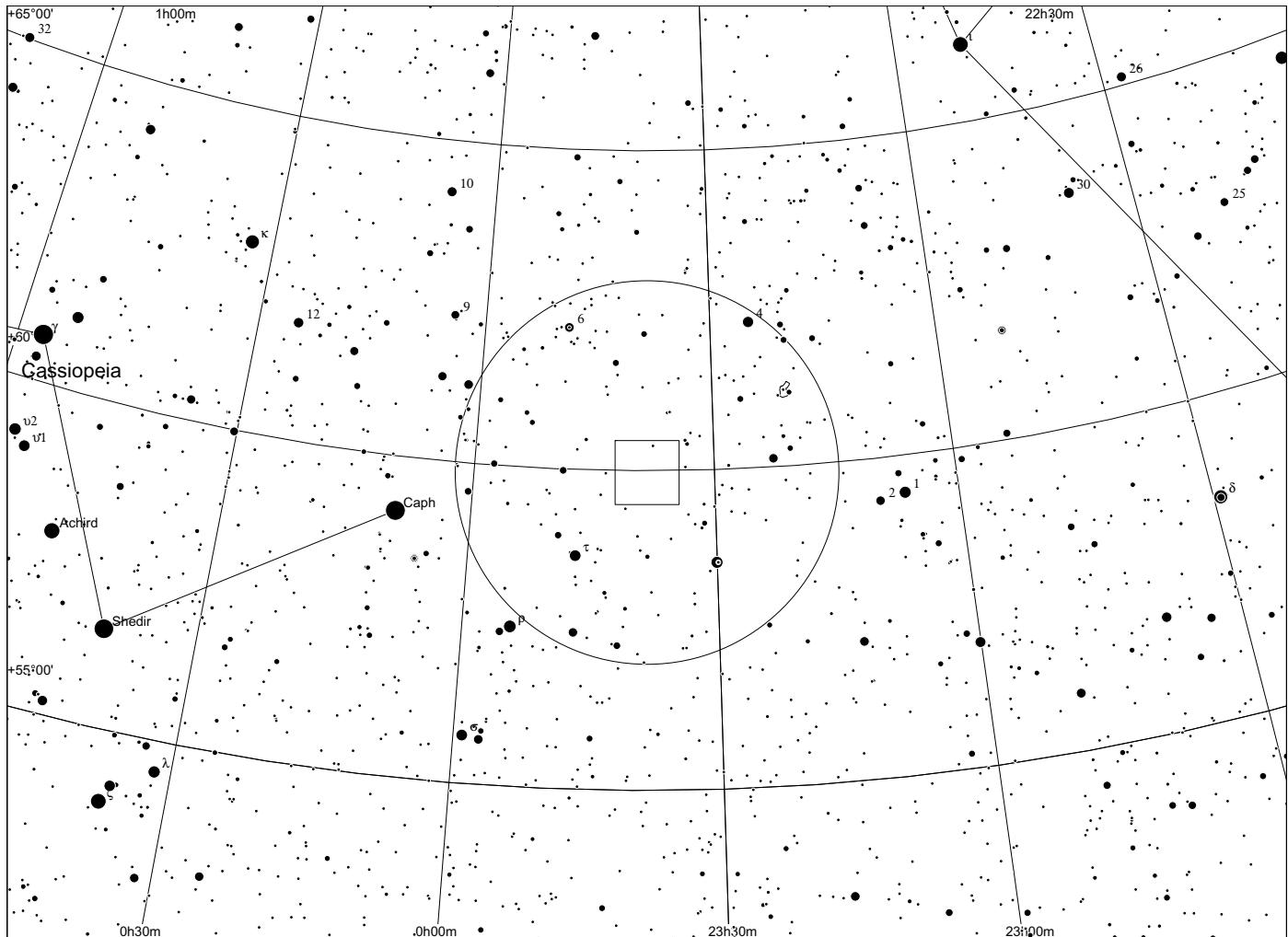
composite

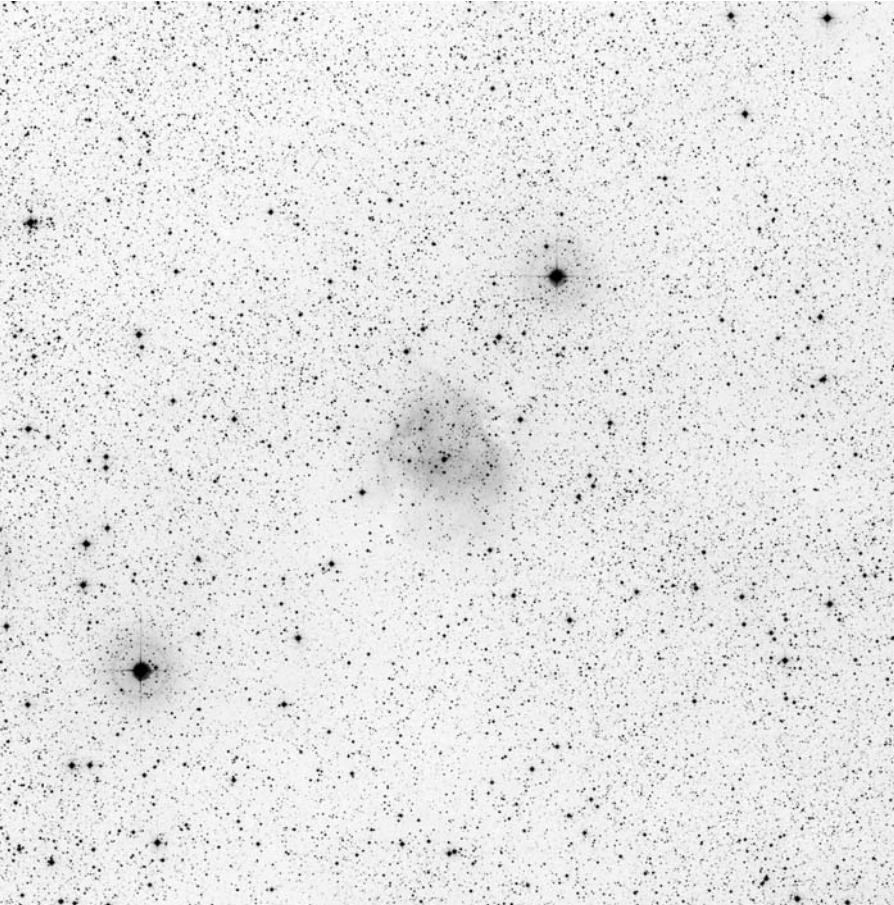
	other name	RA	dec	dia.'	F	S	B
Sh 2-164		23 38 25.3	+59 58 13	3	3	2	2

Distance: 5000 pc, Size: 4.4 pc, Source: 1982ApJS...49..183B

Ionised by the B1 Ib supergiant LS I +59 10 with two distance estimates of 3500 +/- 1500 parsecs and 2820 parsecs.

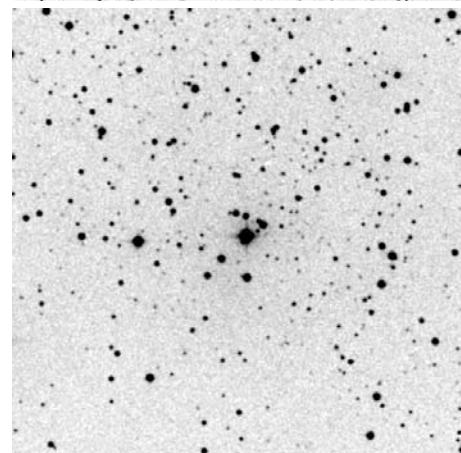
Observing notes:



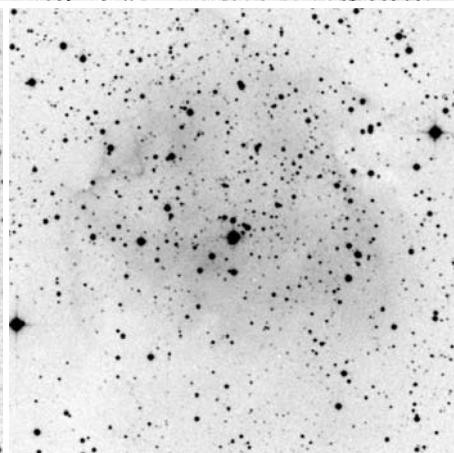


**Sh 2 - 165
in Cassiopeia**

60x60, red



POSS blue



POSS red



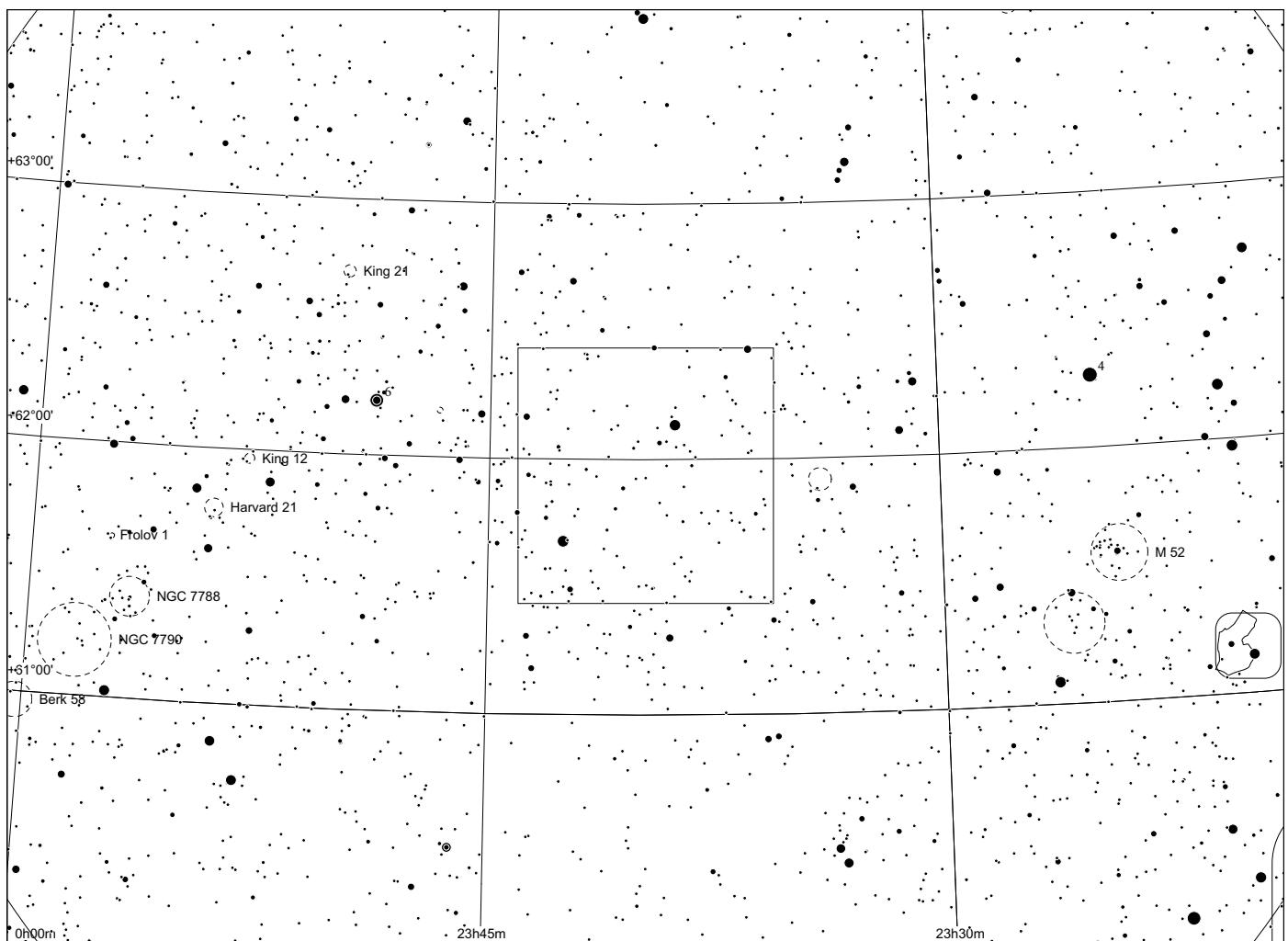
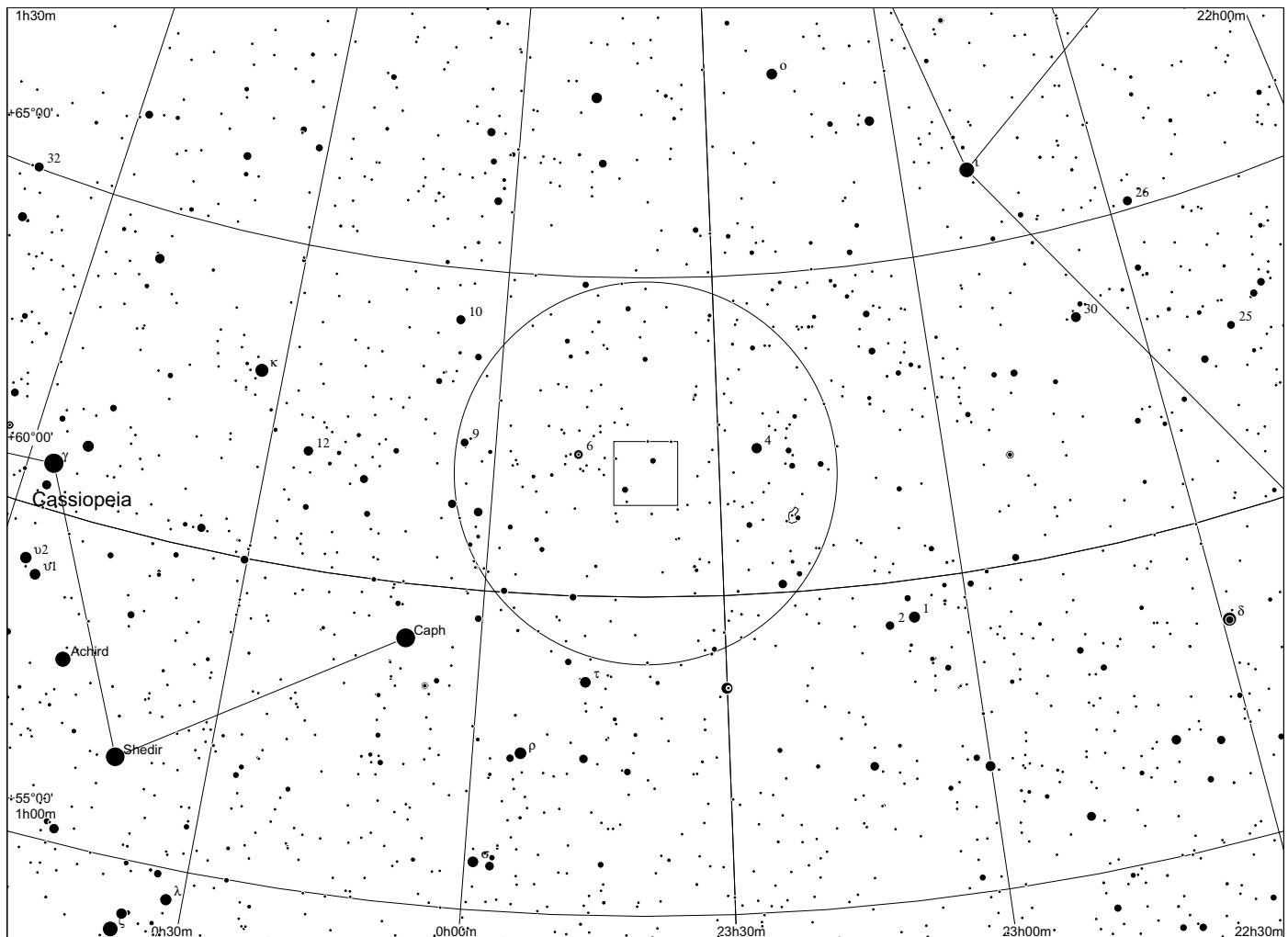
RGB Dean Salman

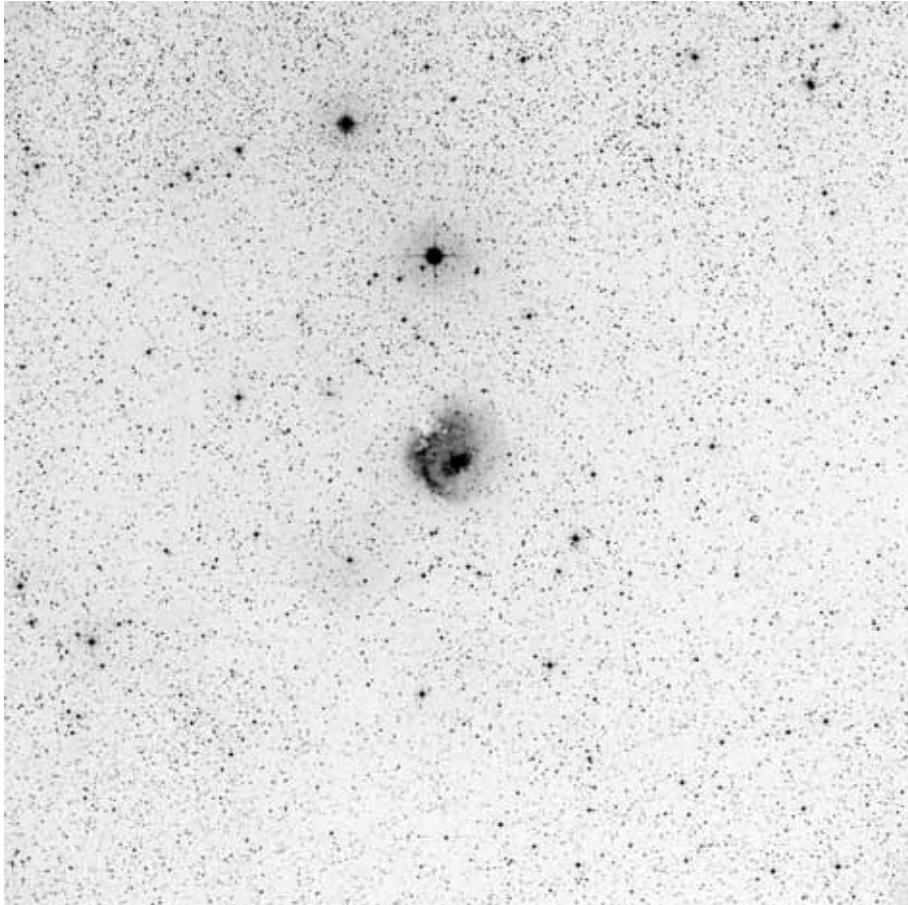
	other name	RA	dec	dia. '	F	S	B
Sh 2-165		23 39 48.1	+61 56 15	10	2	2	2

Distance: 1600 pc, Size: 4.7 pc, Source: 1982ApJS...49..183B

Excited by B0 V star BD 61 +2494, distance estimates of 2020 and 2400 parsecs. Contains the infrared cluster [BDS2003] 46.

Observing notes:





Sh 2 - 168
in Cassiopeia



POSS blue

POSS red

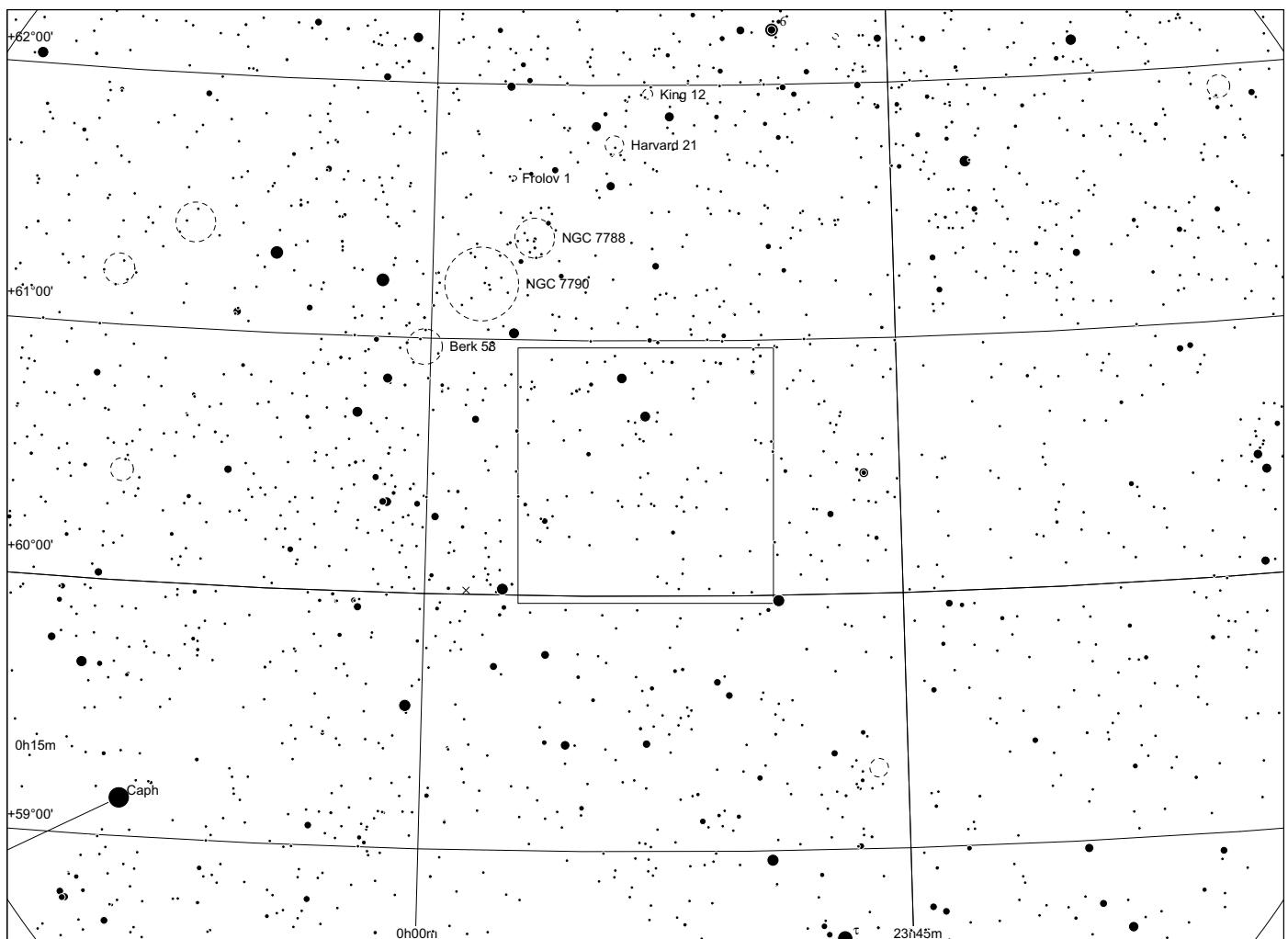
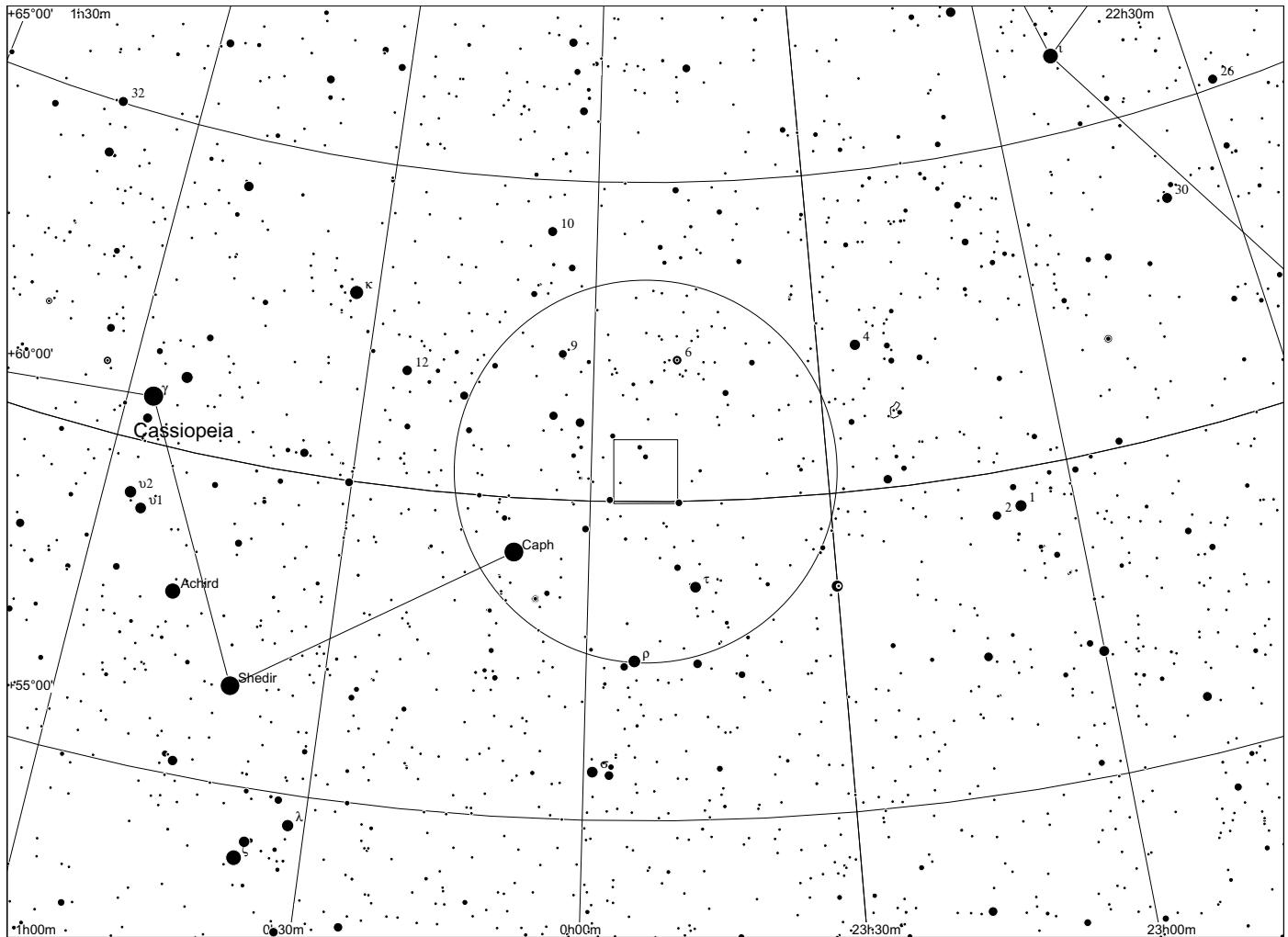
composite

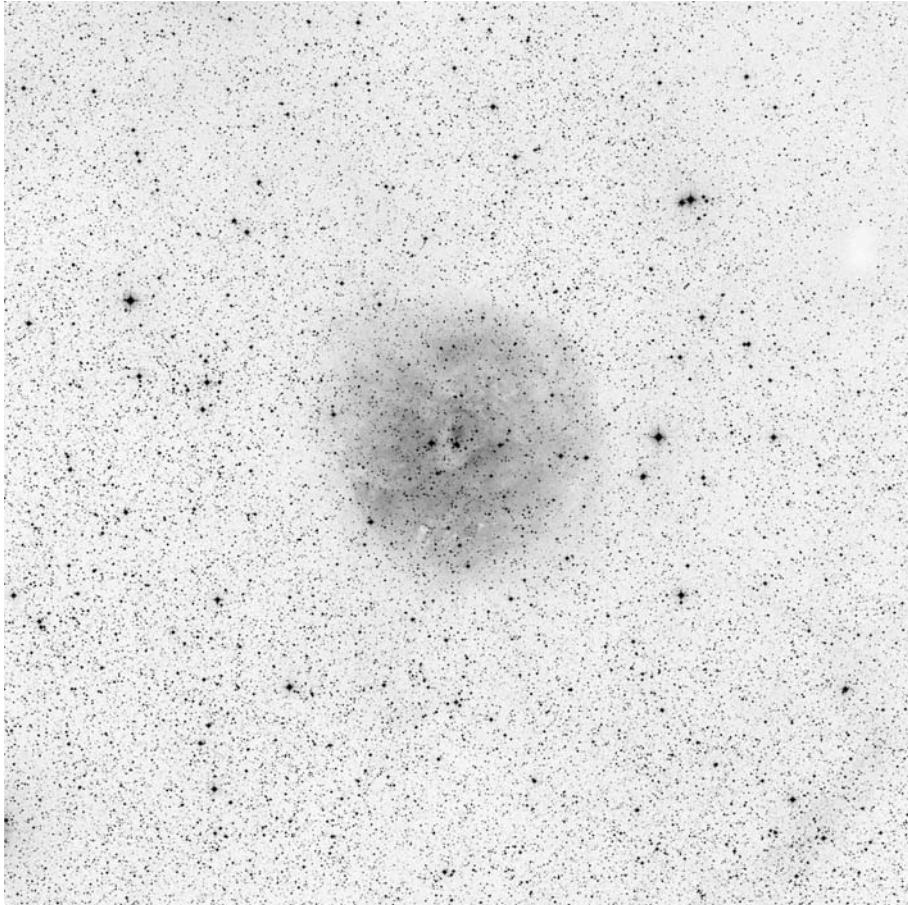
	other name	RA	dec	dia. '	F	S	B
Sh 2-168		23 53 03.5	+60 28 23	7	2	2	2

Distance: 3575 pc, Size: 2.9 pc, Source: 2003A&A...397..213P

This is in the direction of Cas OB5.

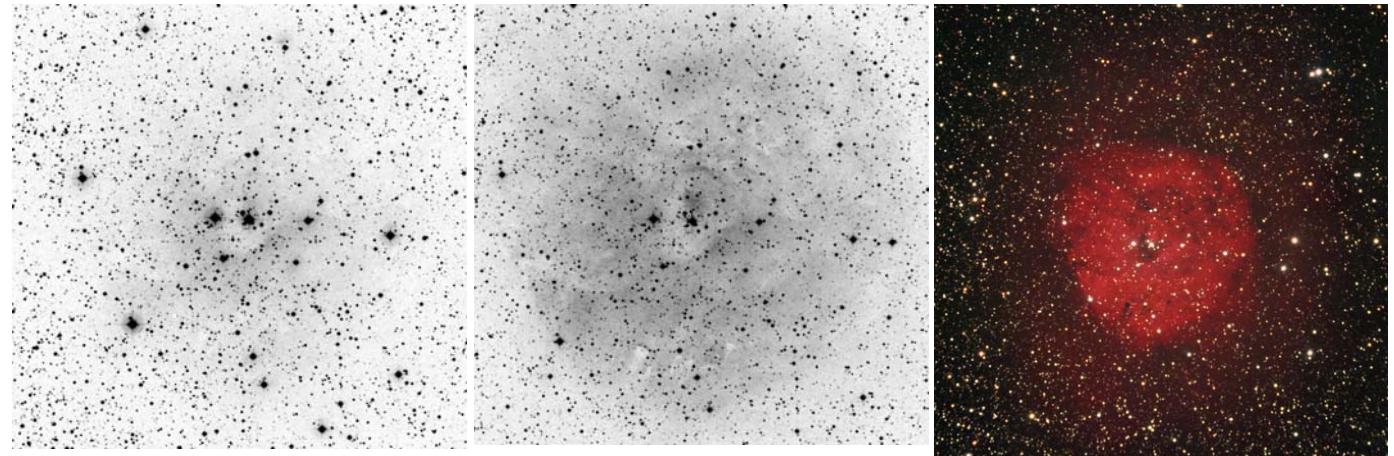
Observing notes:





**Sh 2 - 170
in Cassiopeia**

60x60, red



POSS blue

POSS red

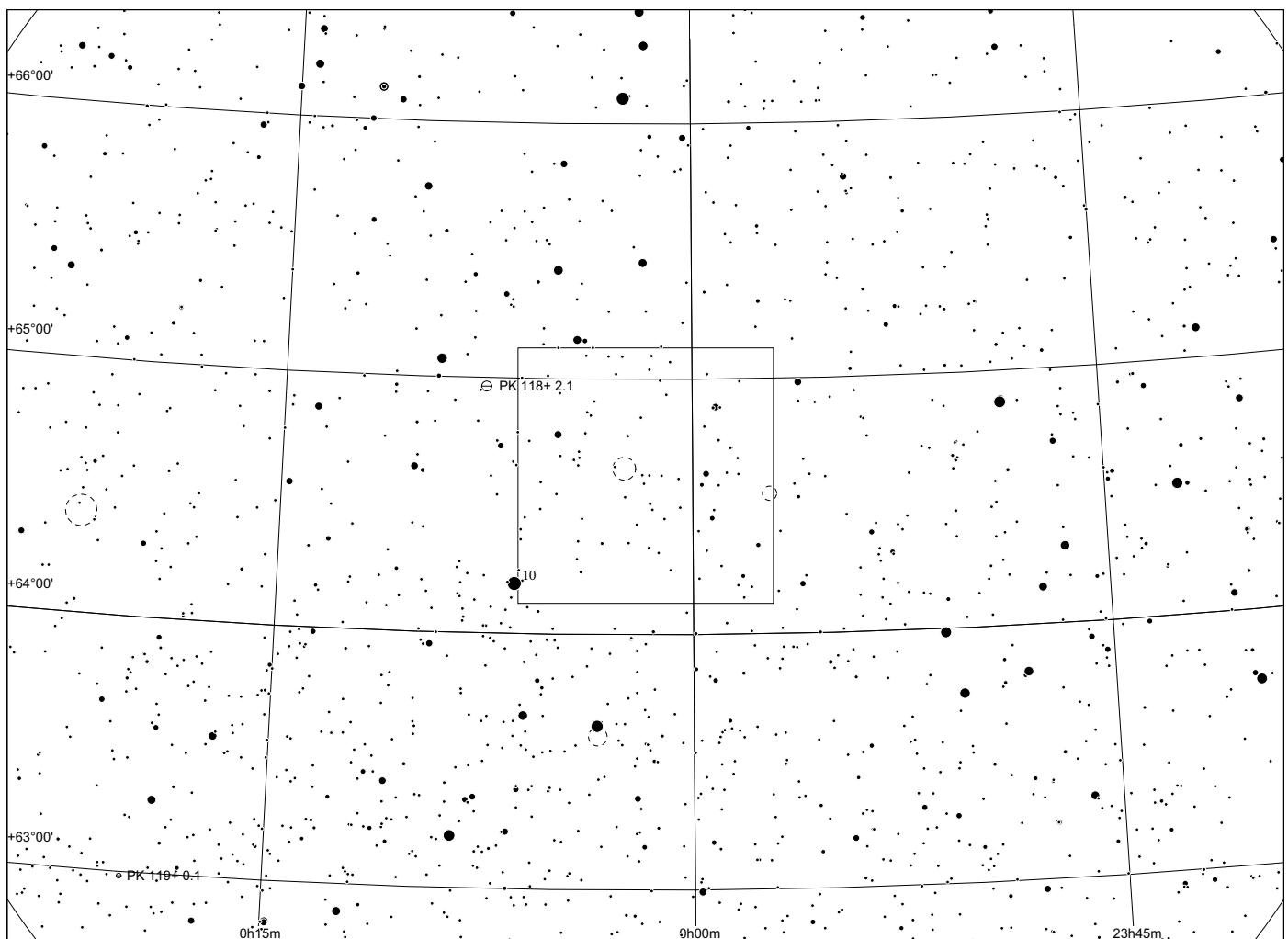
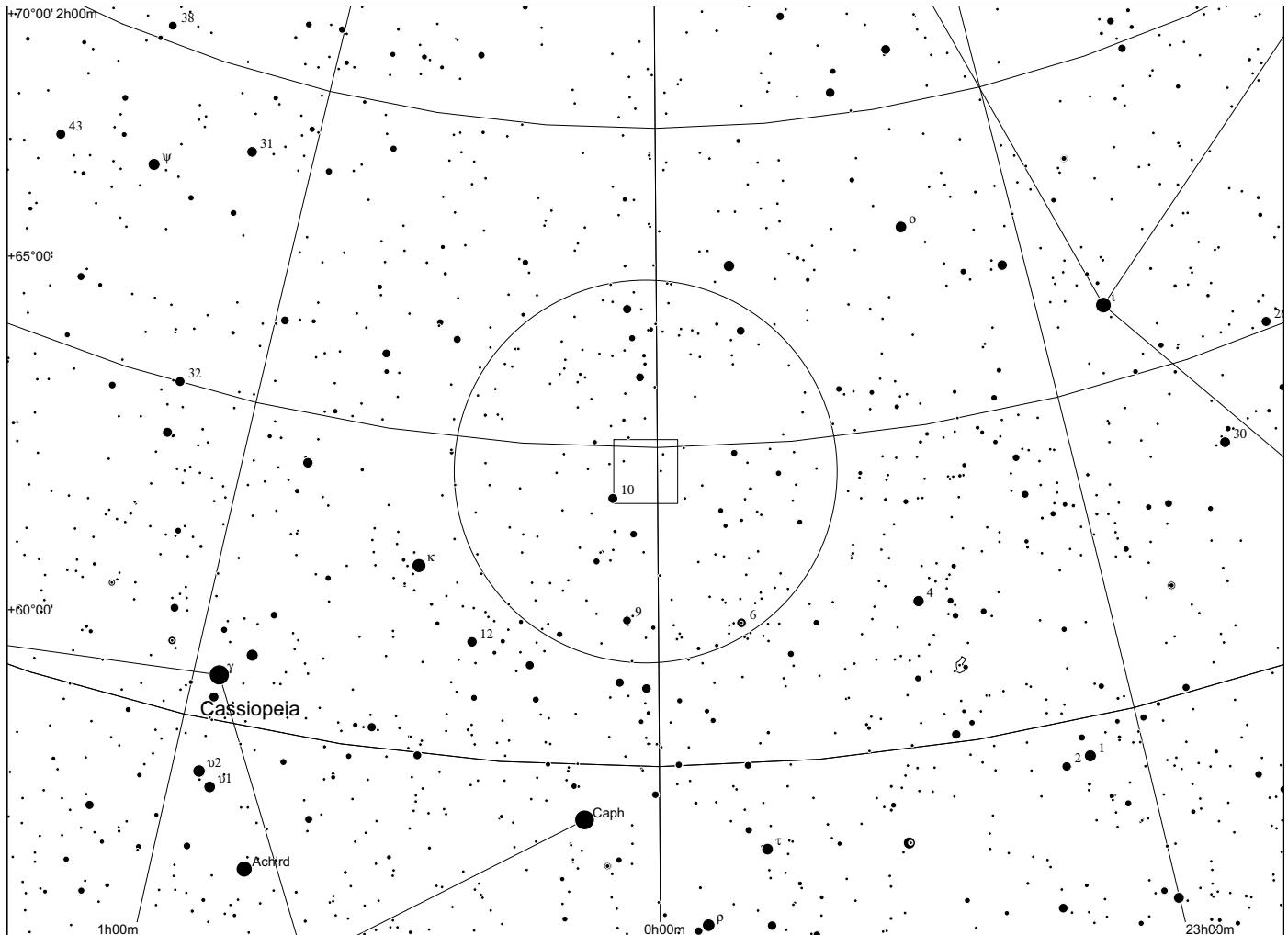
RGB Dean Salman

	other name	RA	dec	dia. '	F	S	B
Sh 2-170		00 01 42.0	+64 37 24	20	1	2	2

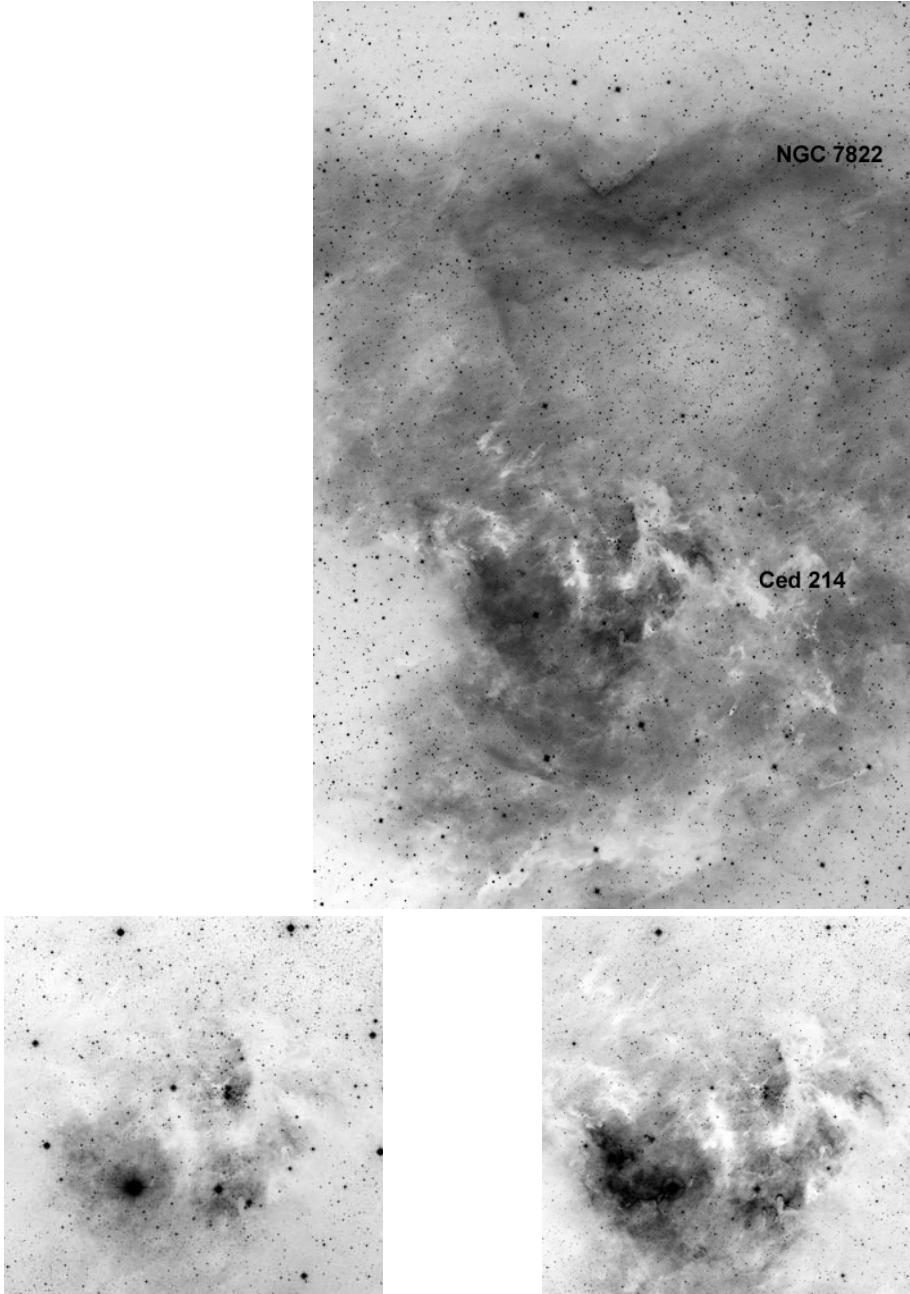
Distance: 2300 pc, Size: 13.4 pc, Source: 1982ApJS...49..183B

Sh 2-170 is in the vicinity of the Cassiopeia OB5 supershell. The sole exciting star of Sh 2-170 is DM+63 2093, an O8 V star of 31 solar masses.

Observing notes:



**Sh 2 - 171
in Cepheus**



POSS blue

POSS red

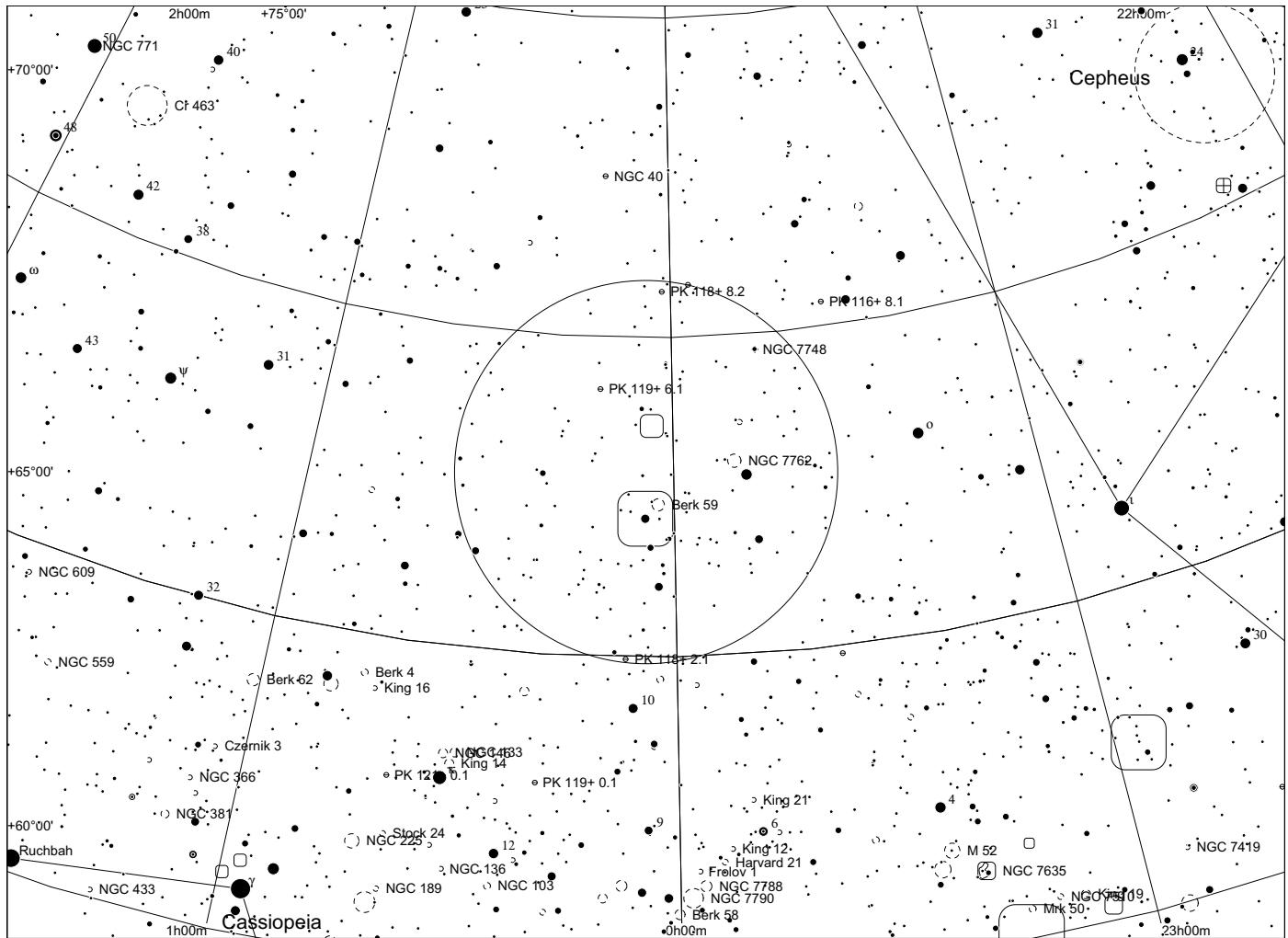
Halpha RGB Dean Salman

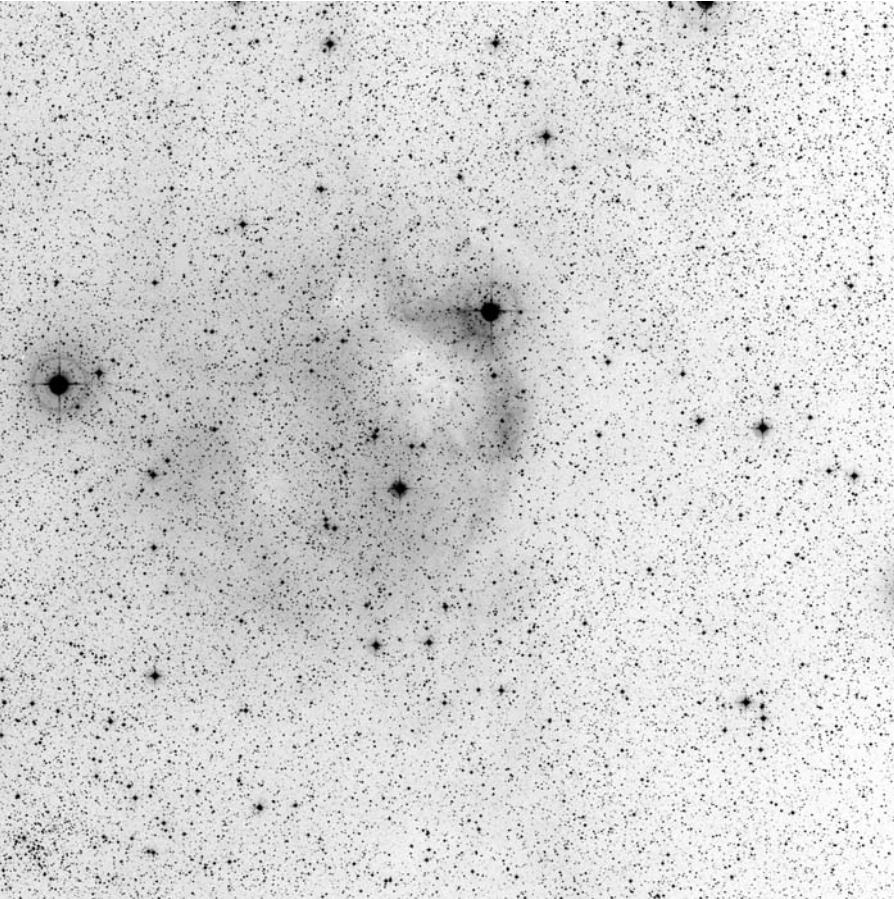
	other name	RA	dec	dia. '	F	S	B
Sh 2-171	NGC7822 + Ced214	00 04 40.0	+67 09 24	180	3	2	3

Distance: 840 pc, Size: 44.0 pc, Source: 1982ApJS...49..183B

This expanding shell of gas and dust was created by the original star cluster at the heart of the Cep OB4 association, which has now dispersed. It is now lit and ionized by the young star cluster Berkeley 59, at its south end (Cederblad 214) and it is expanding into the dark nebula NGC 7822 at its north end. Berkeley 59 is surrounded by another dark region of disturbed gas and dust containing the radio source W1.

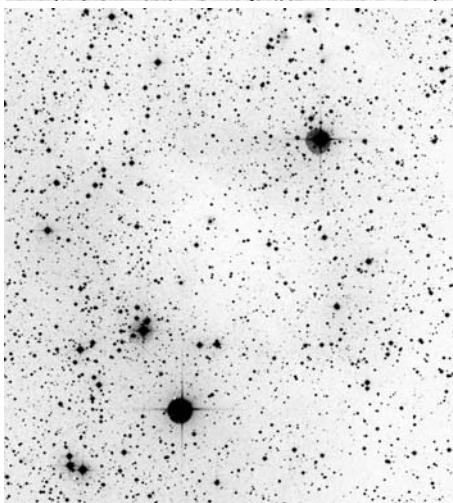
Observing notes:



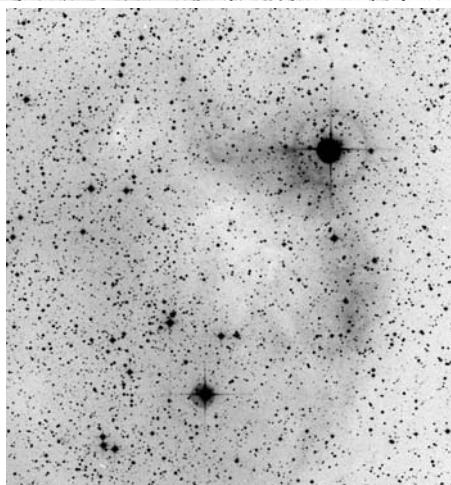


**Sh 2 - 173
in Cassiopeia**

60x60, red



POSS blue



POSS red



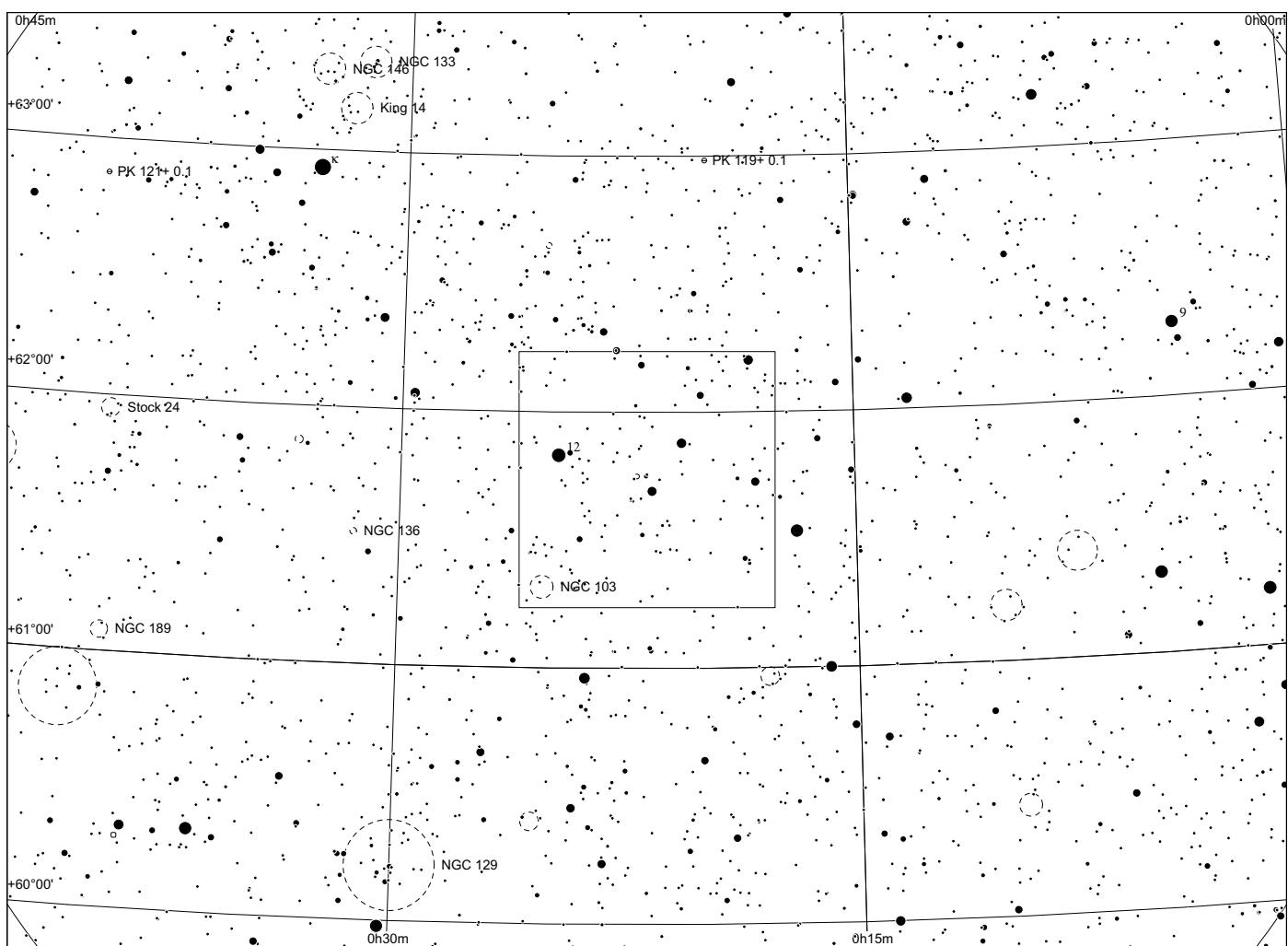
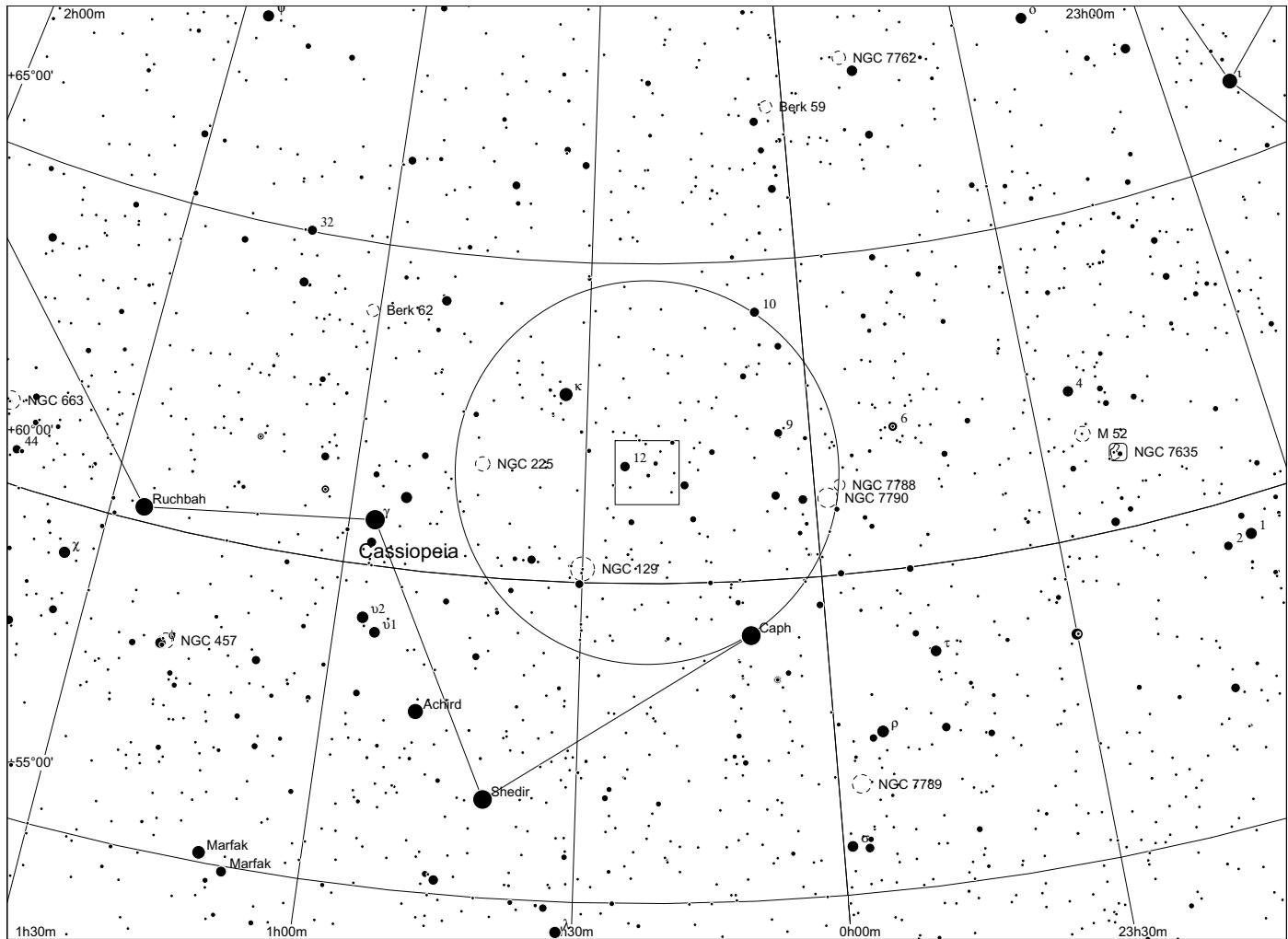
composite

	other name	RA	dec	dia. '	F	S	B
Sh 2-173		00 21 51.8	+61 44 17	30	1	2	2

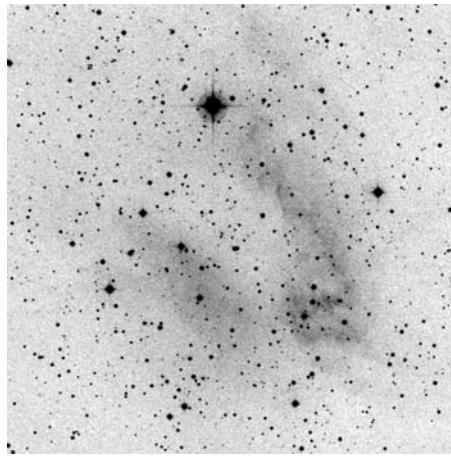
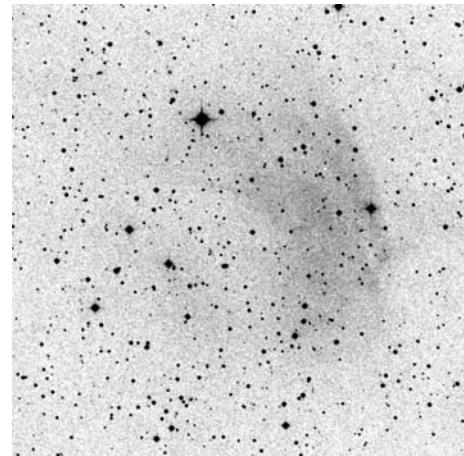
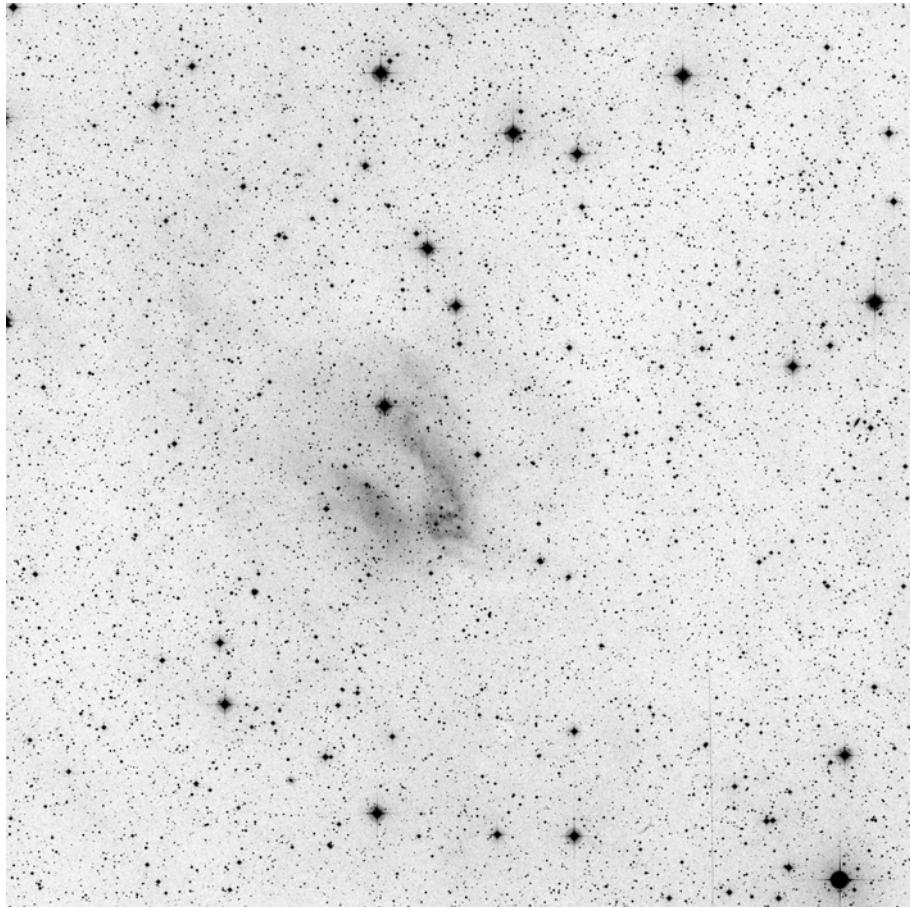
Distance: 2700 pc, Size: 23.6 pc, Source: 1982ApJS...49..183B

Sh 2-173 is part of the Cas OB5 super shell.

Observing notes:



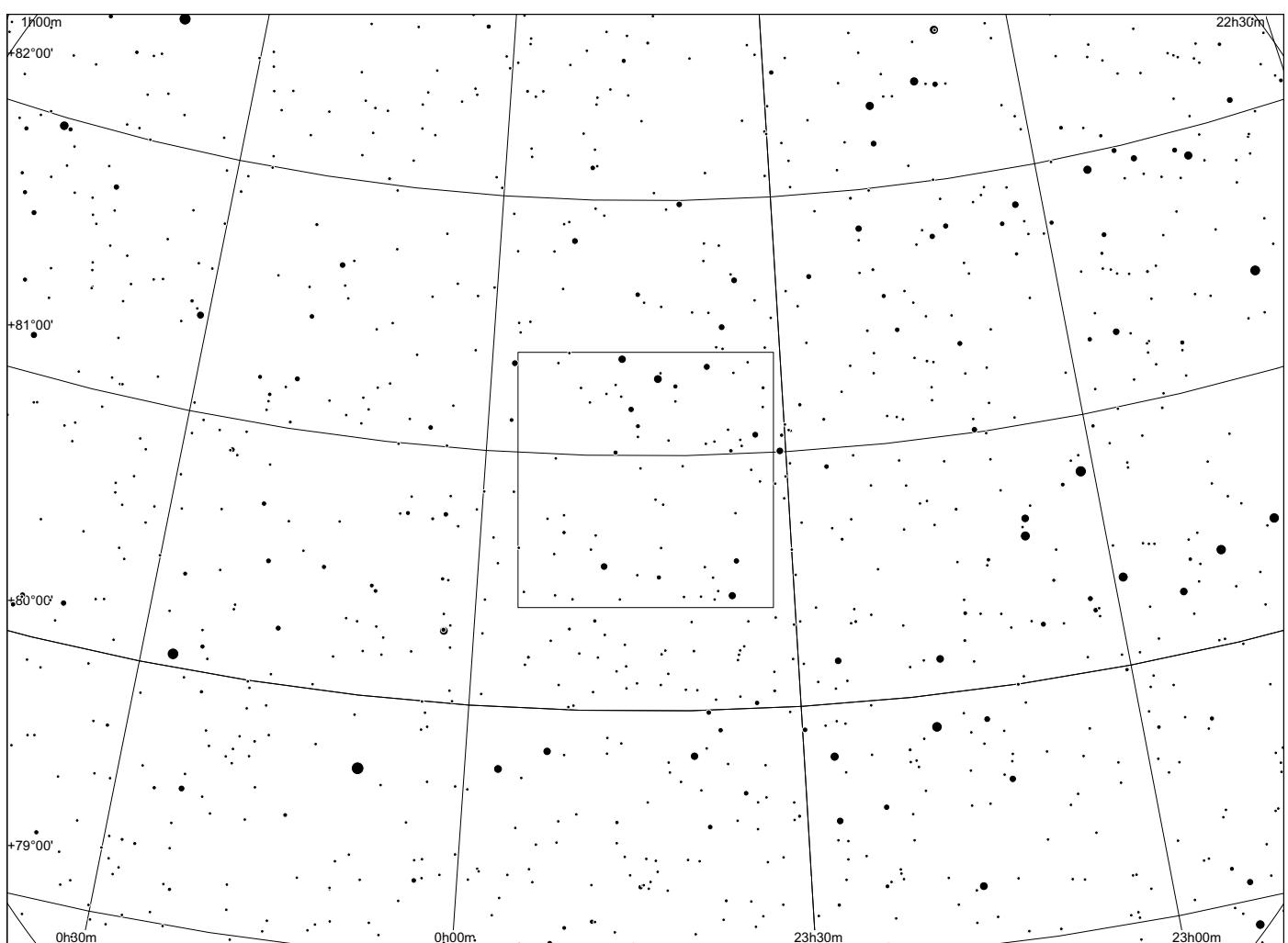
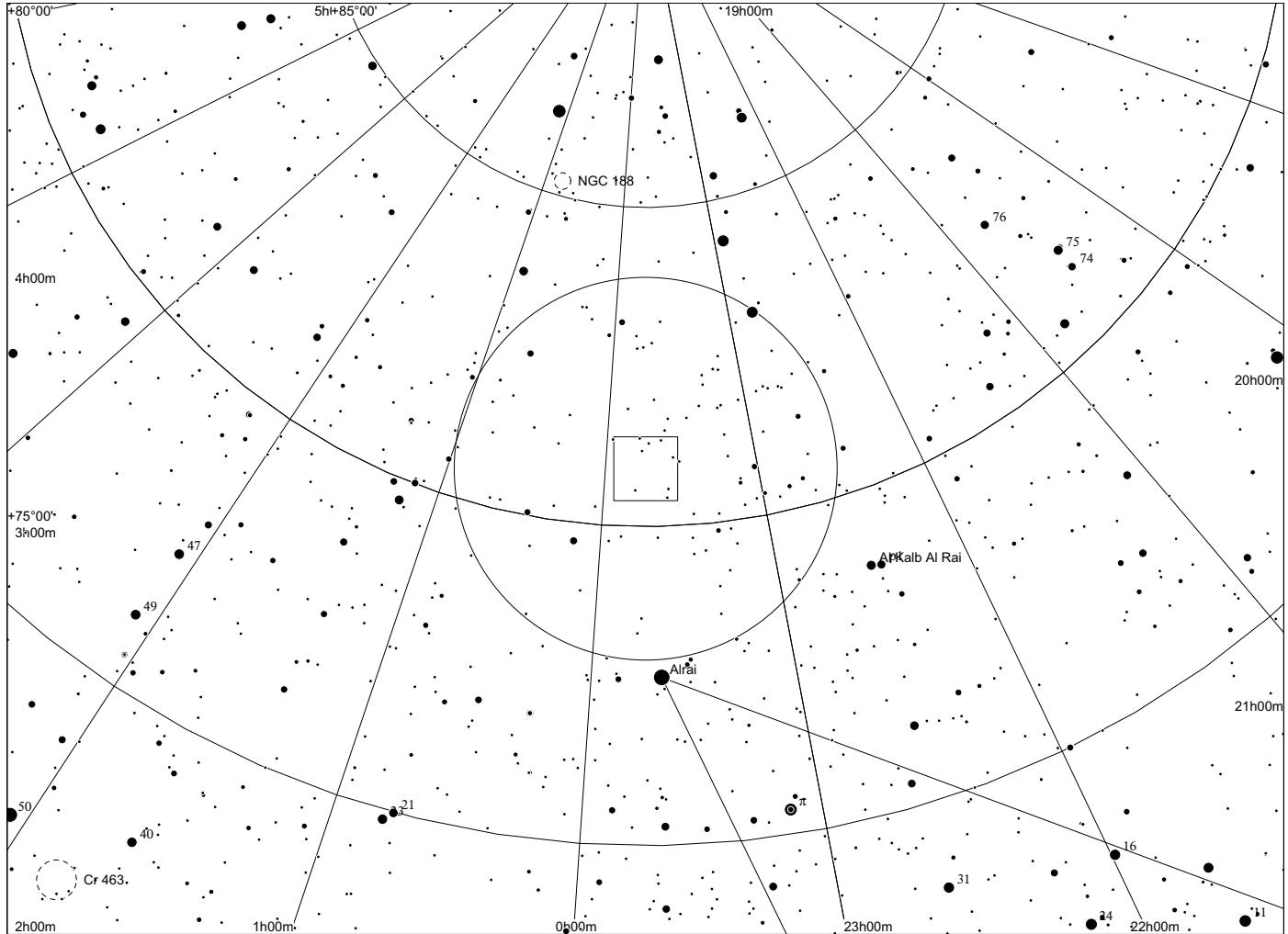
**Sh 2 - 174
in Cepheus**

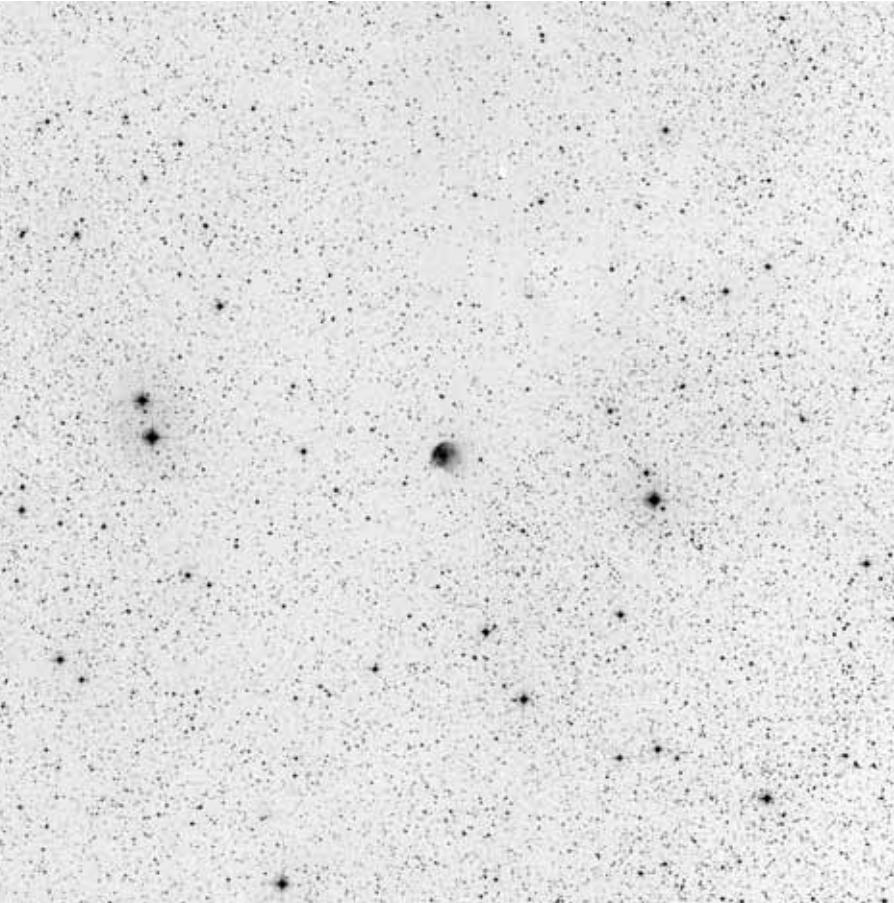


	other name	RA	dec	dia. '	F	S	B
Sh 2-174		23 46 49.1	+80 56 20	10	3	2	1

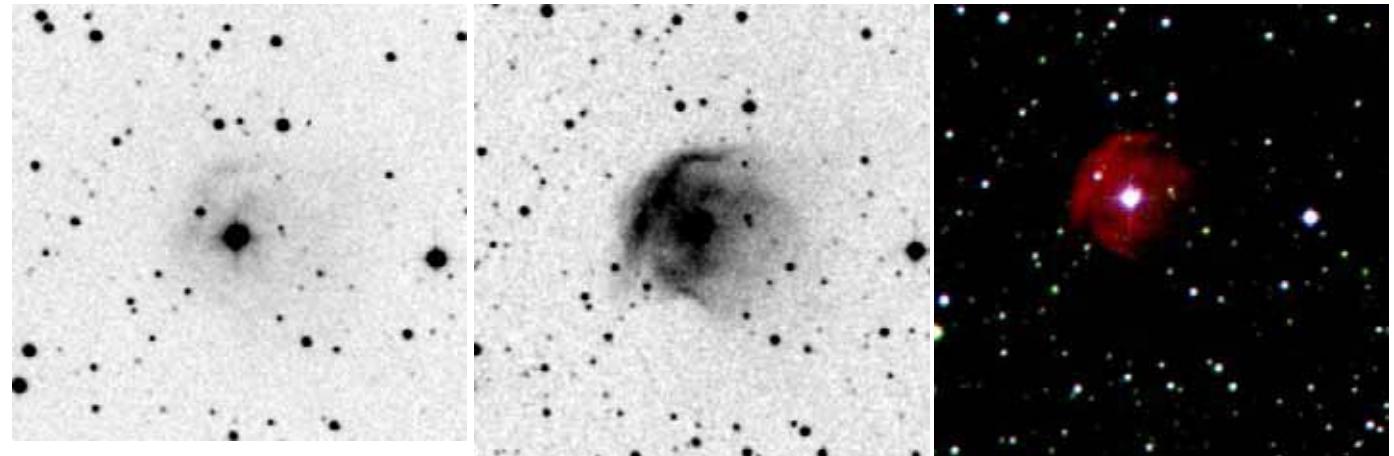
The former central star of this old planetary nebula, the white dwarf GD 561, has drifted to the outside of the nebula. Both are located about 300 pc away.

Observing notes:





Sh 2 - 175
in Cassiopeia



POSS blue

POSS red

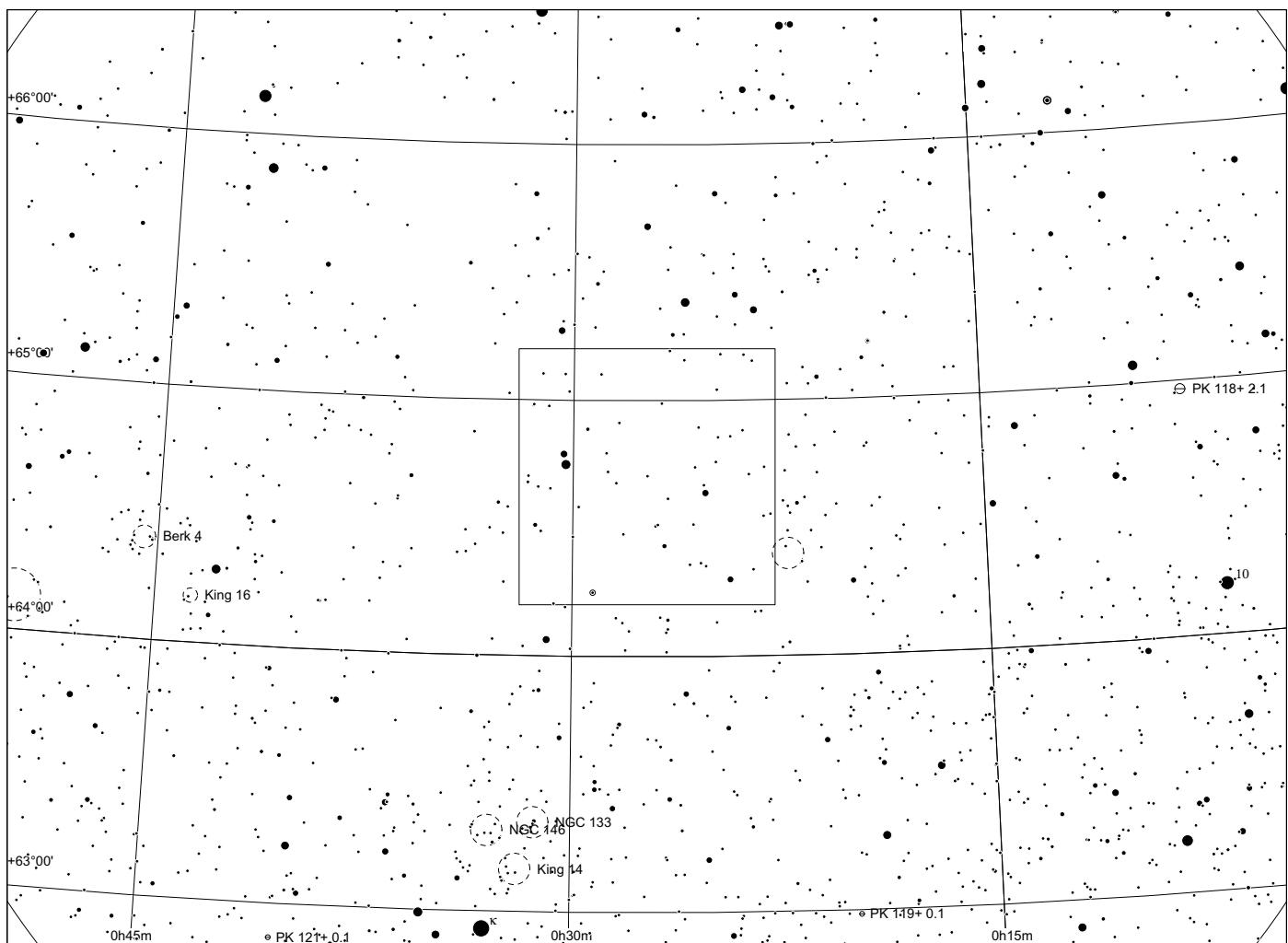
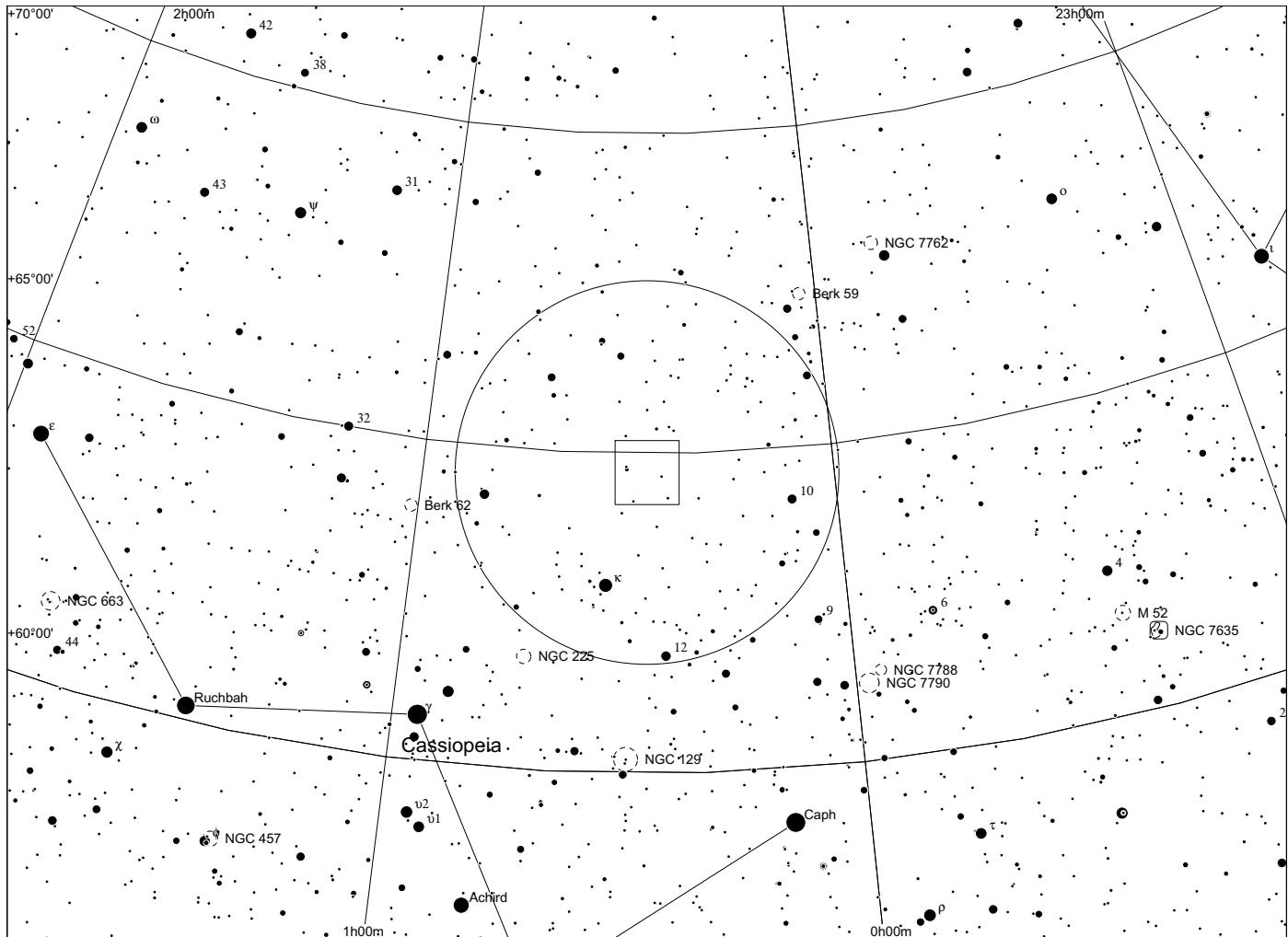
composite

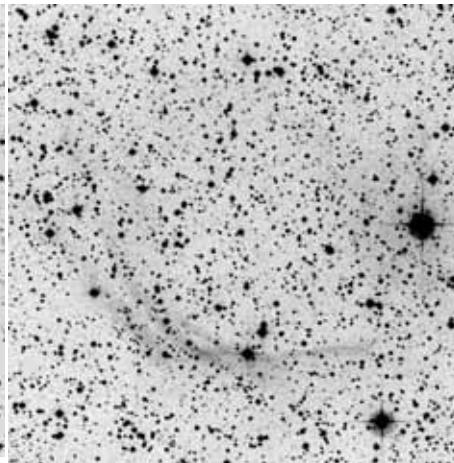
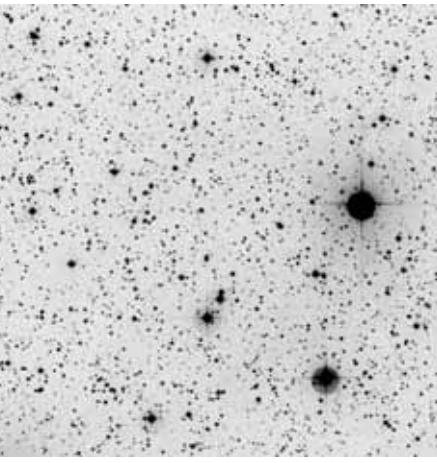
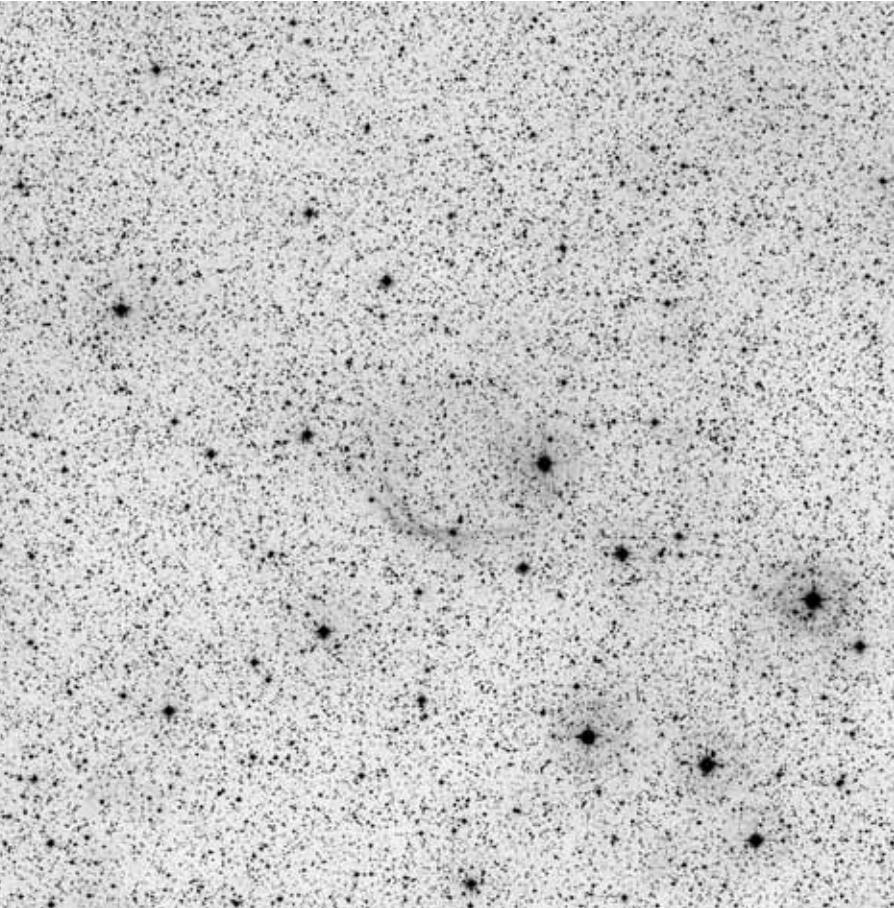
	other name	RA	dec	dia. '	F	S	B
Sh 2-175		00 27 18.6	+64 42 13	2	1	2	2

Distance: 1700 pc, Size: 1.0 pc, Source: 1982ApJS...49..183B

This is in Cas OB5.

Observing notes:





60x60, red

POSS blue

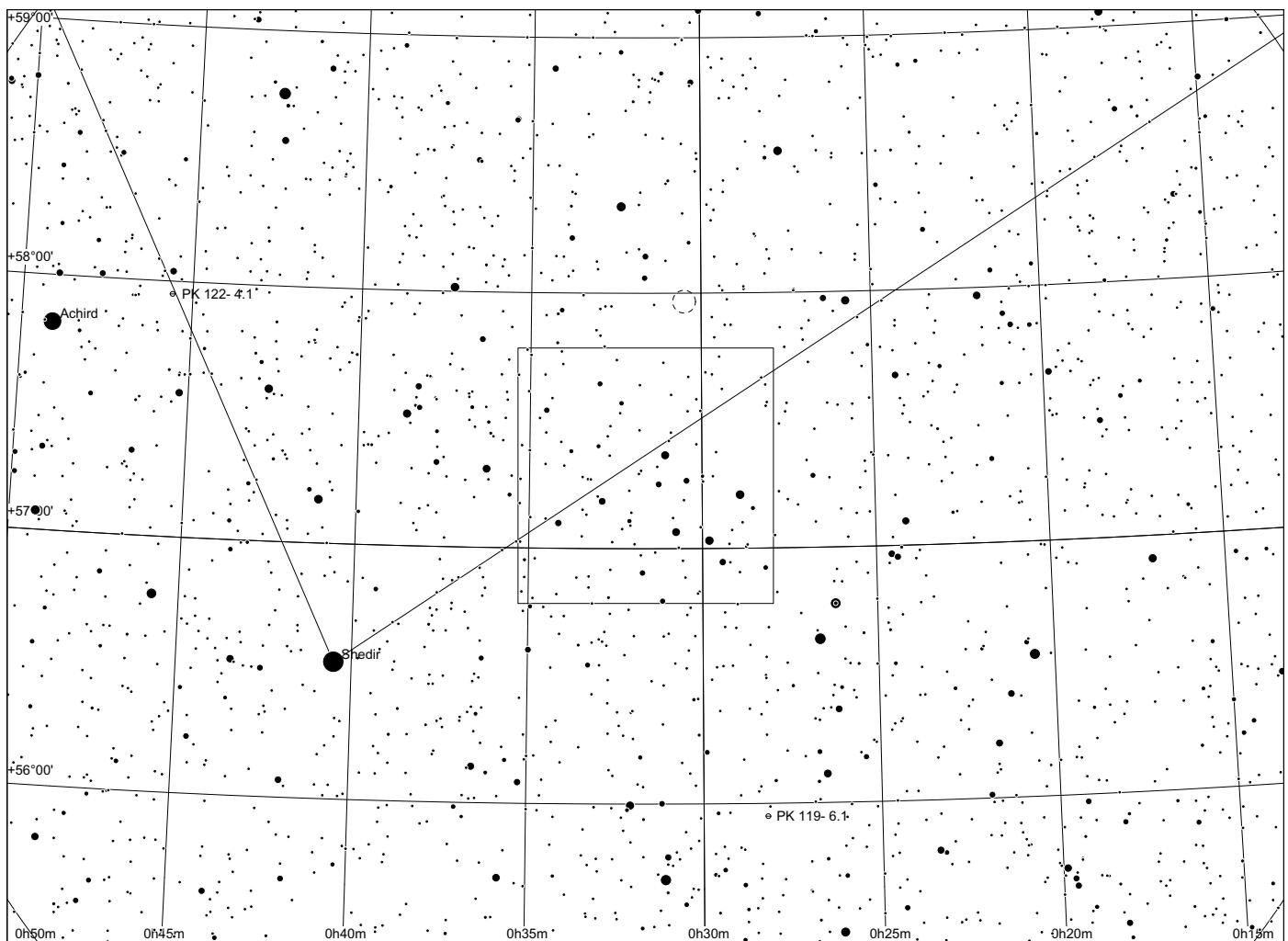
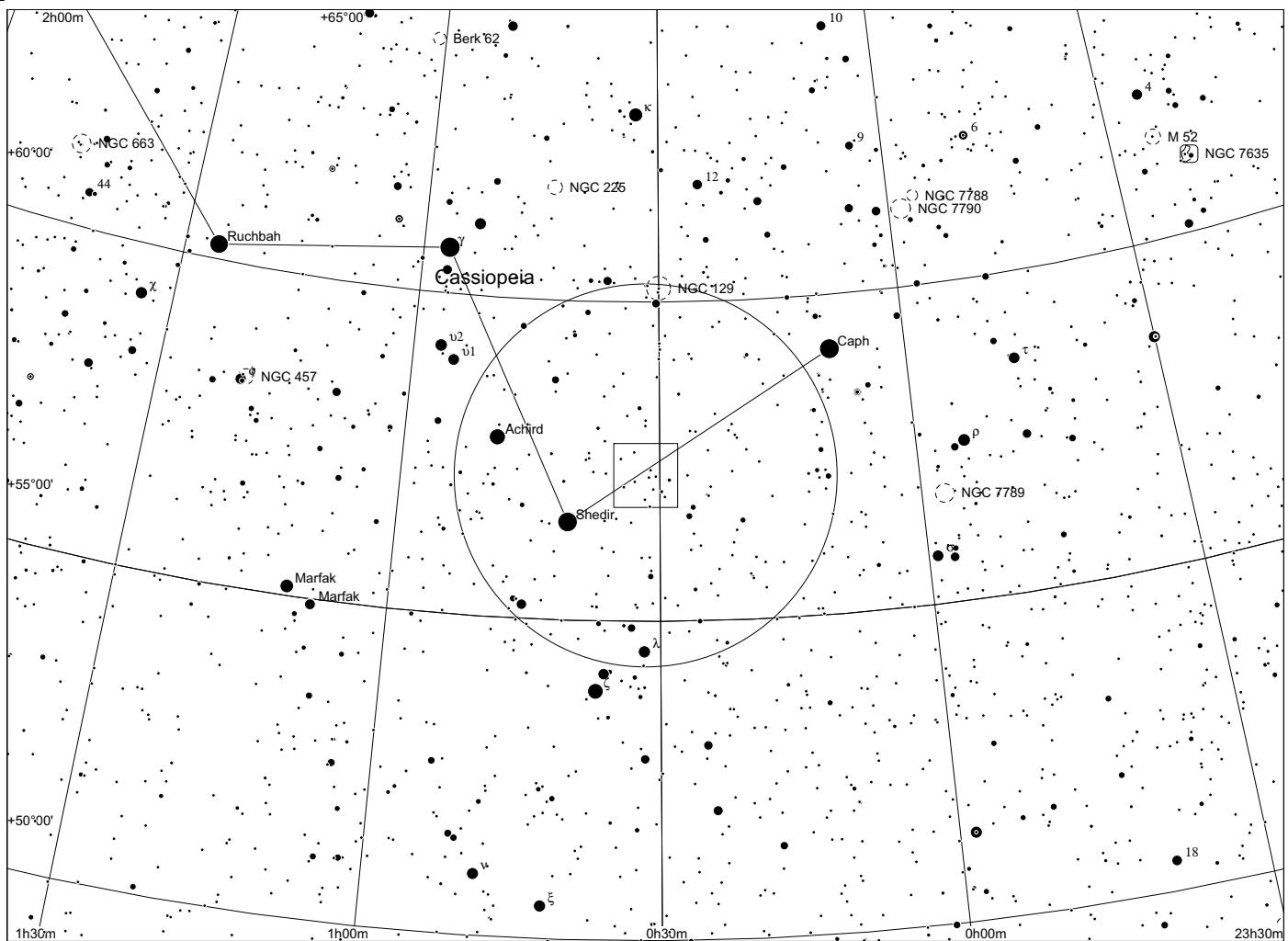
POSS red

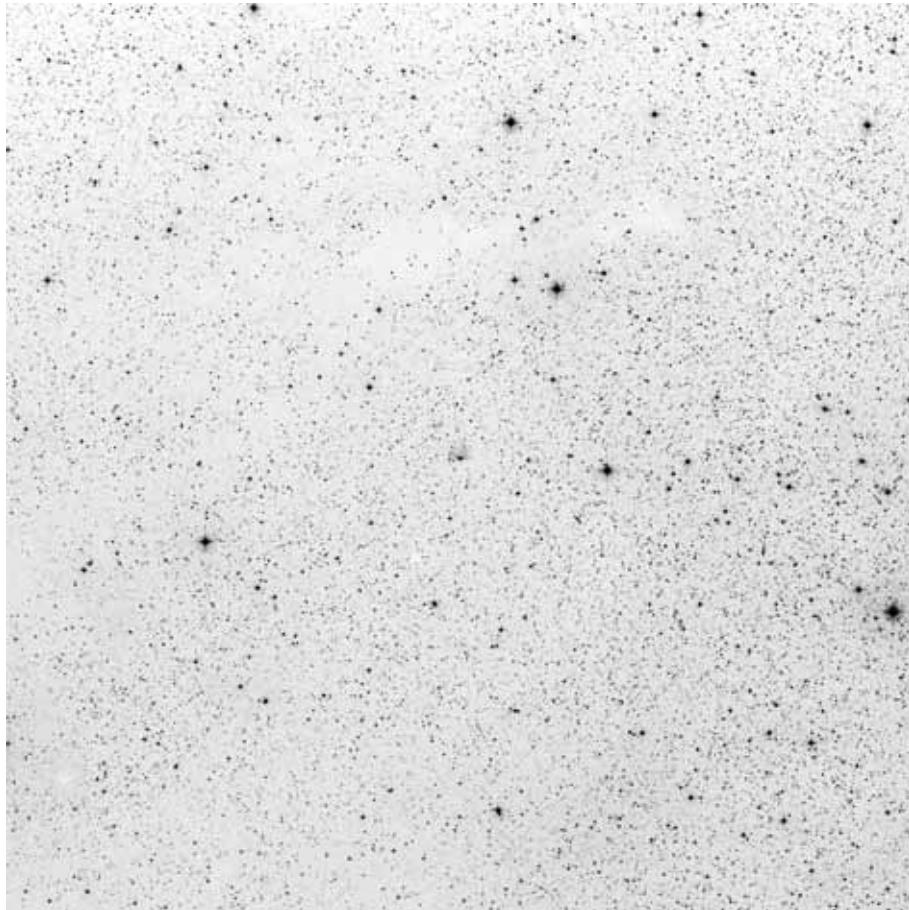
composite

	other name	RA	dec	dia. '	F	S	B
Sh 2-176		00 31 38.3	+57 17 09	10	3	2	1

This is a planetary nebula at a distance of about 140 pc. The central star is a blue subdwarf.

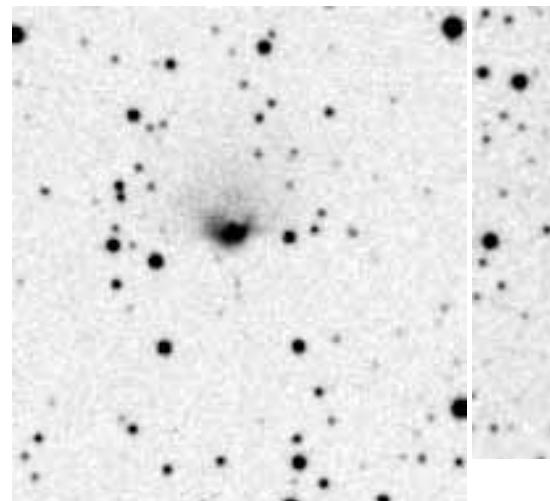
Observing notes:



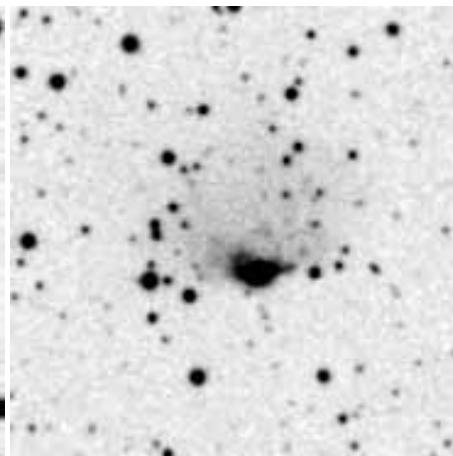


**Sh 2 - 179
in Cassiopeia**

60x60, red



POSS blue



POSS red

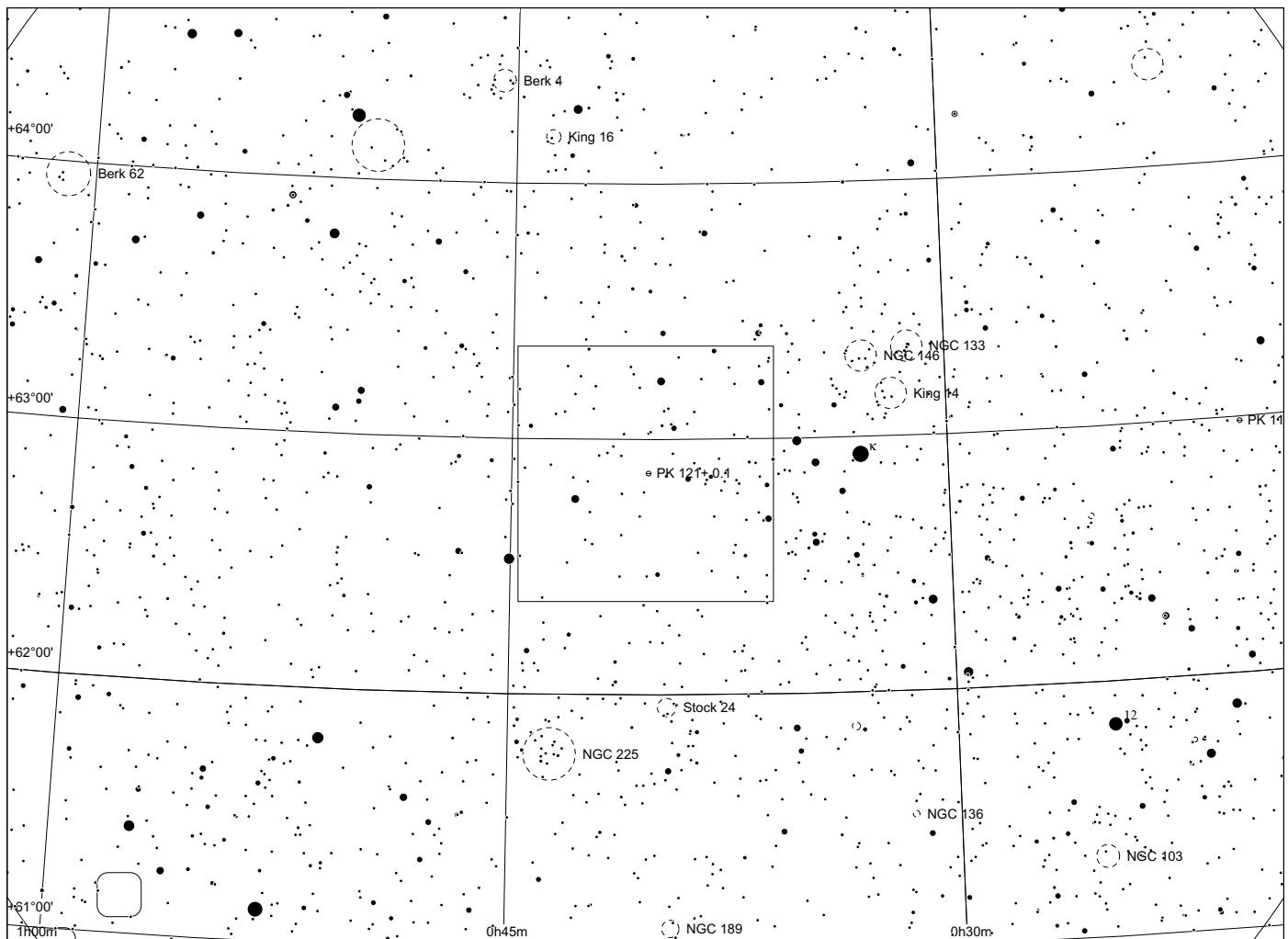
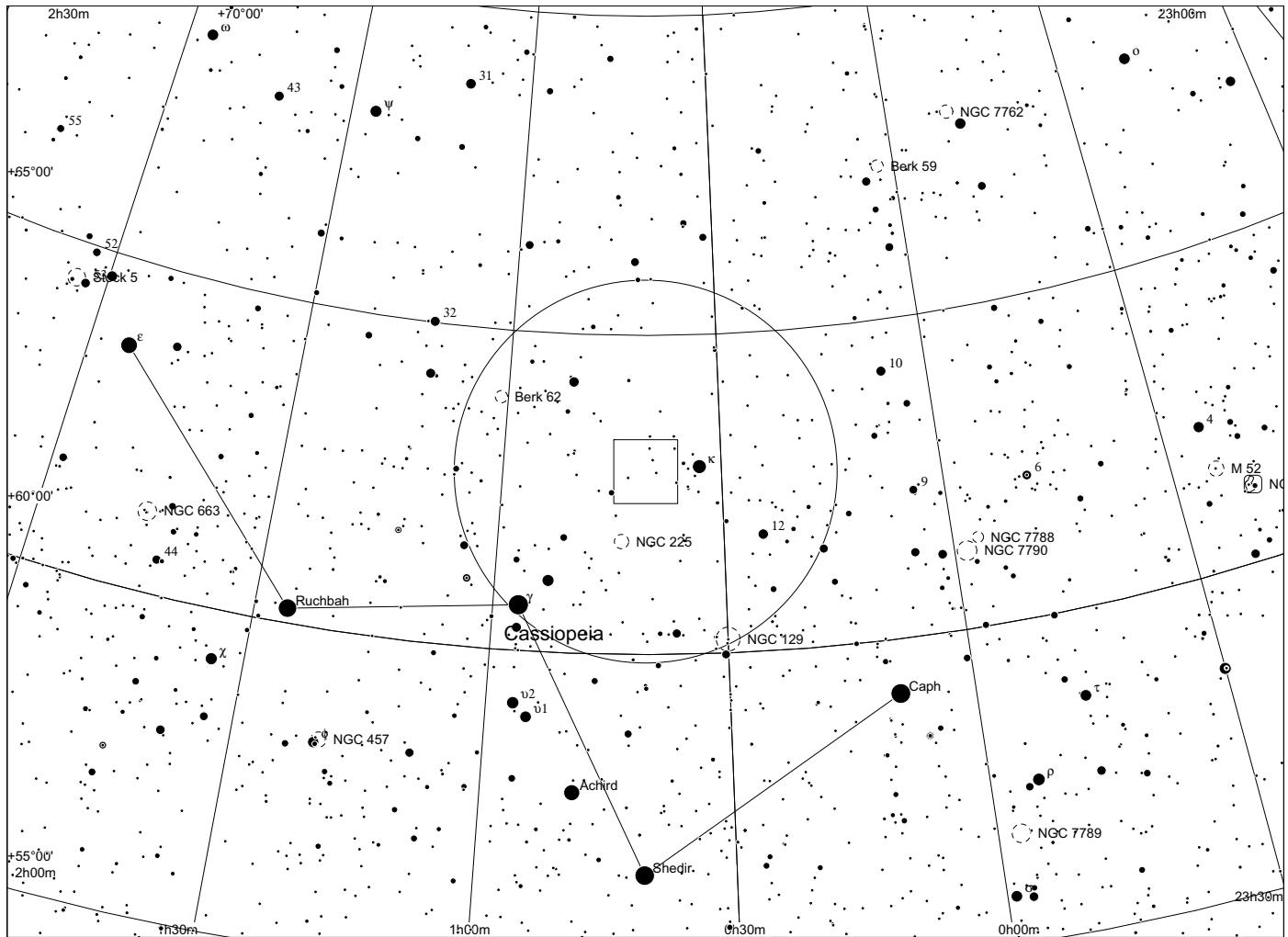


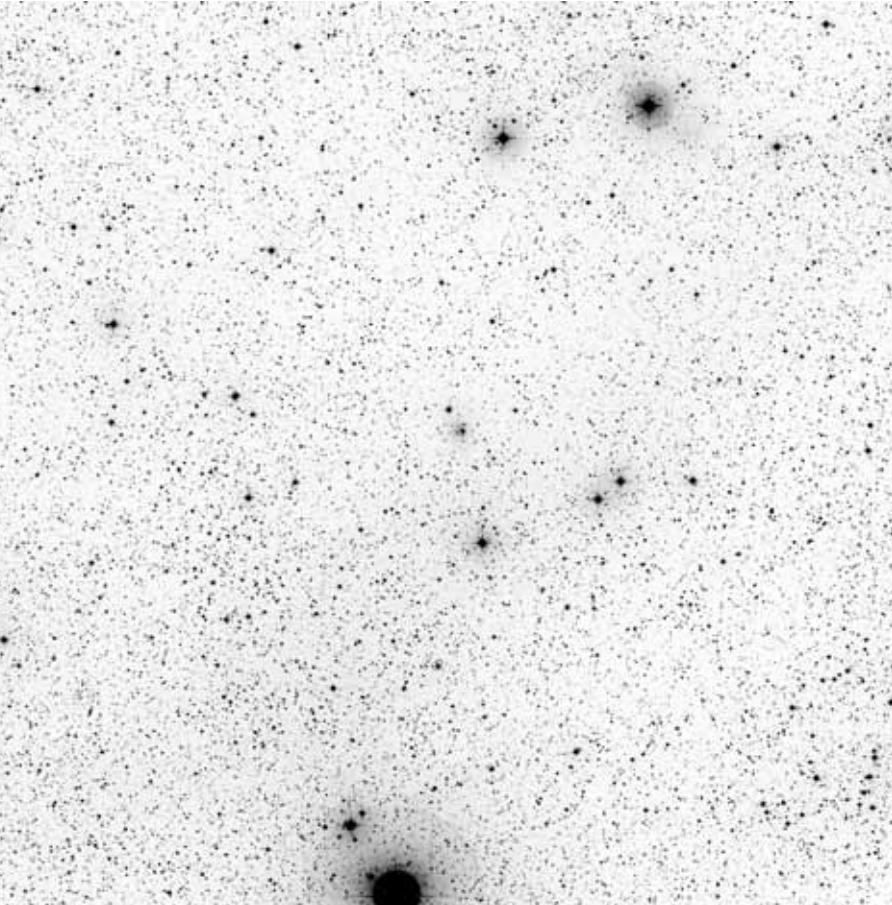
composite

	other name	RA	dec	dia. '	F	S	B
Sh 2-179	BV 5-2	00 40 24.6	+62 51 58	1	1	1	1

This is the planetary nebula PN BV-2, at an unknown distance.

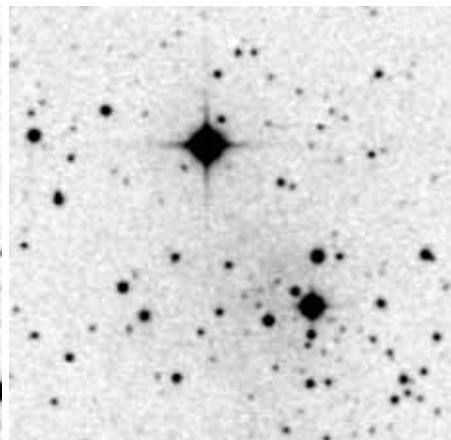
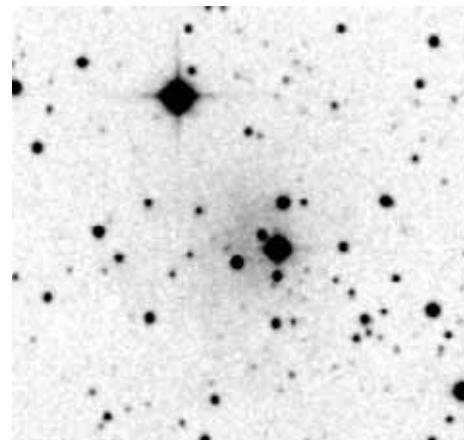
Observing notes:





Sh 2 - 182
in Cassiopeia

60x60, blue



POSS blue

POSS red

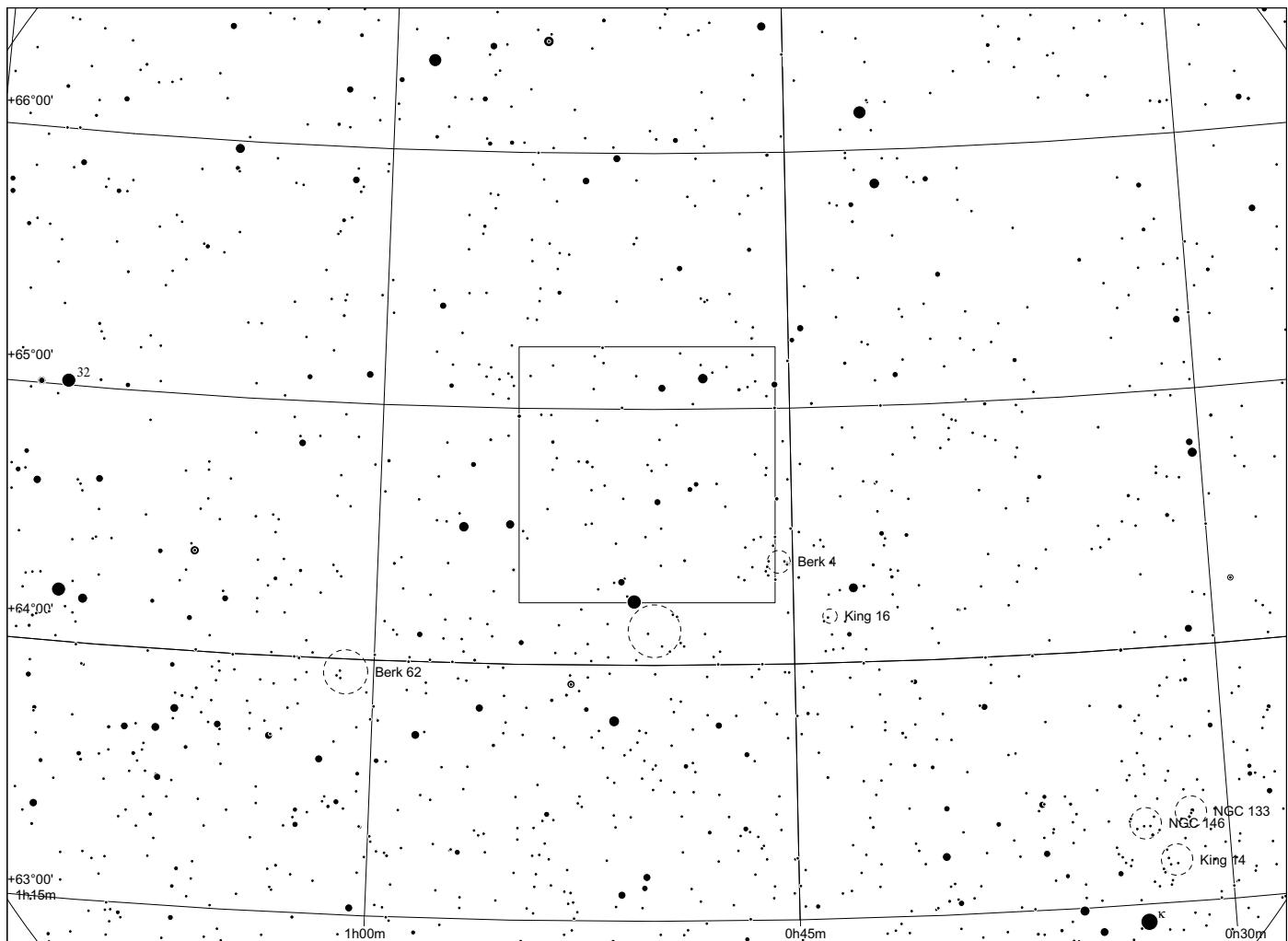
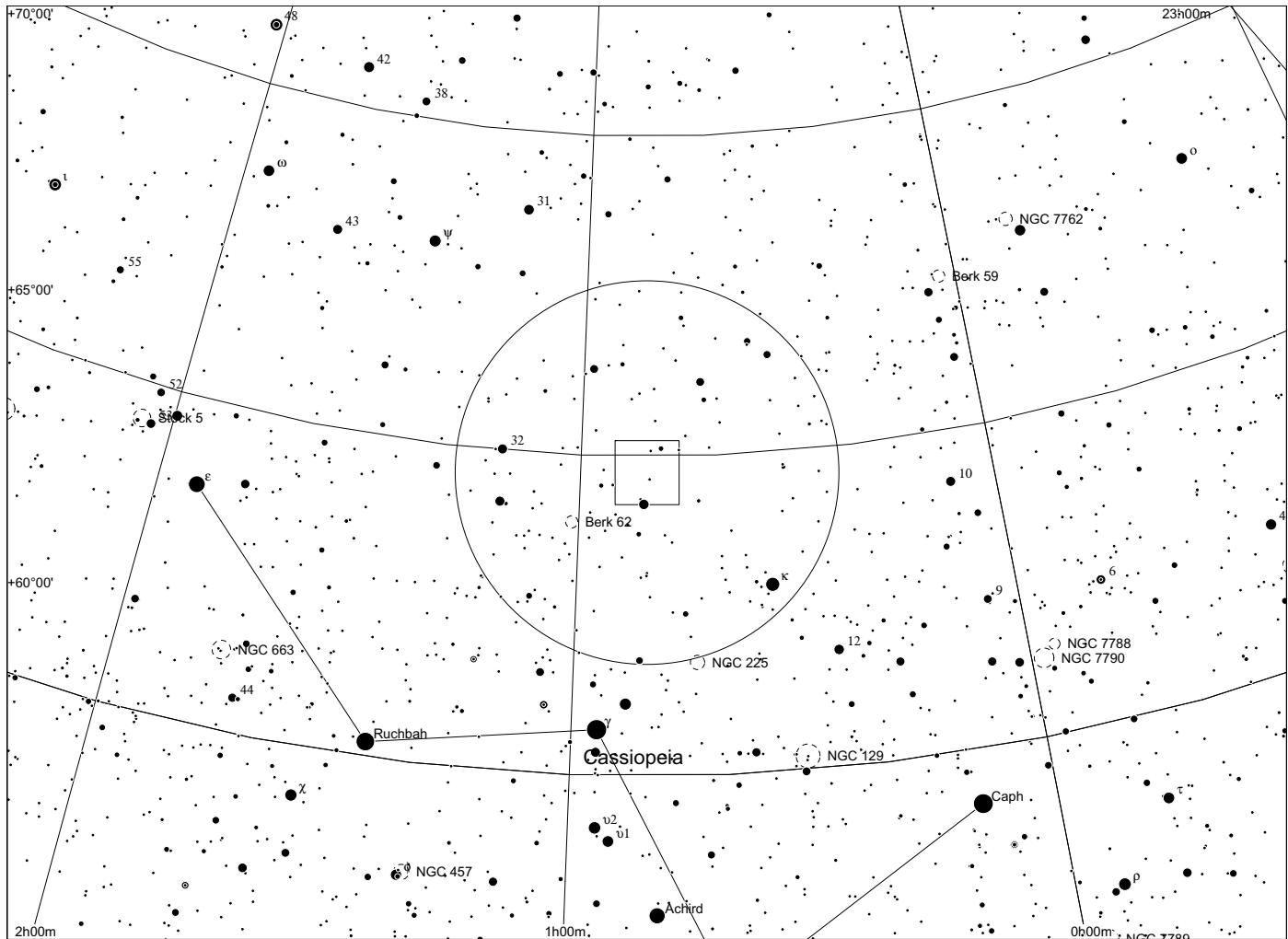
composite

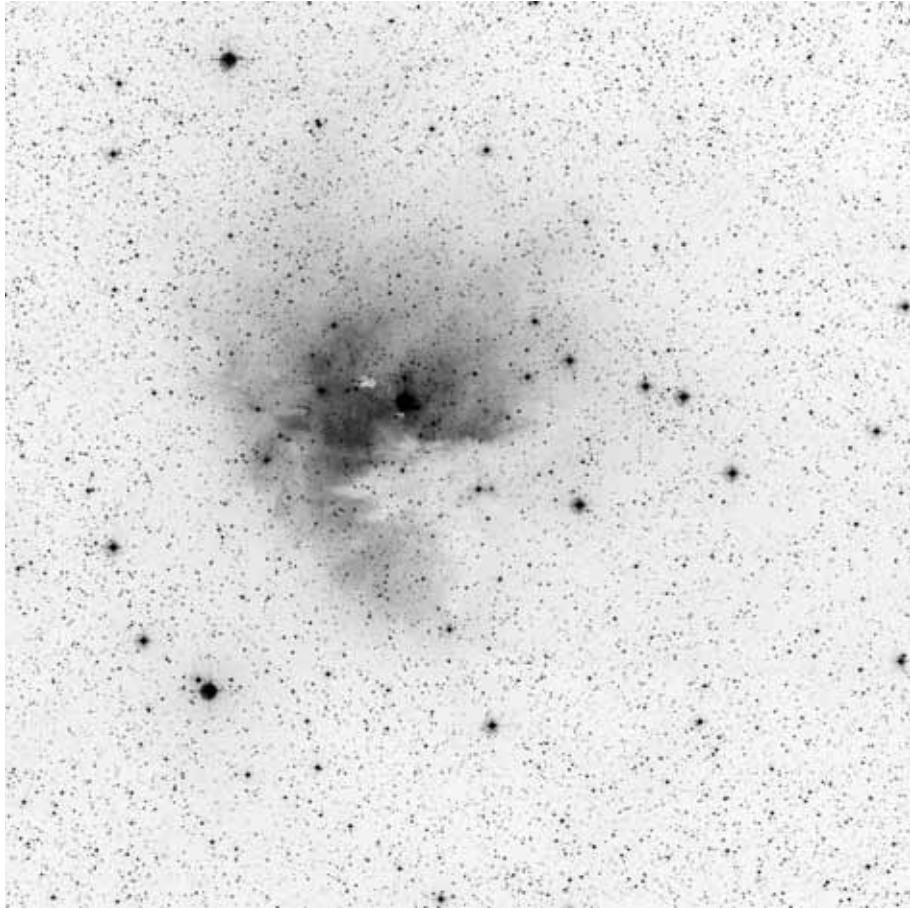
	other name	RA	dec	dia. '	F	S	B
Sh 2-182		00 50 16.4	+64 44 42	2	3	1	1

Distance: 1400 pc, Size: 0.8 pc, Source: 2003A&A...397..133R

This appears to be a reflection nebula of unknown distance.

Observing notes:





Sh 2 - 184

in Cassiopeia

60x60, blue



POSS blue

POSS red

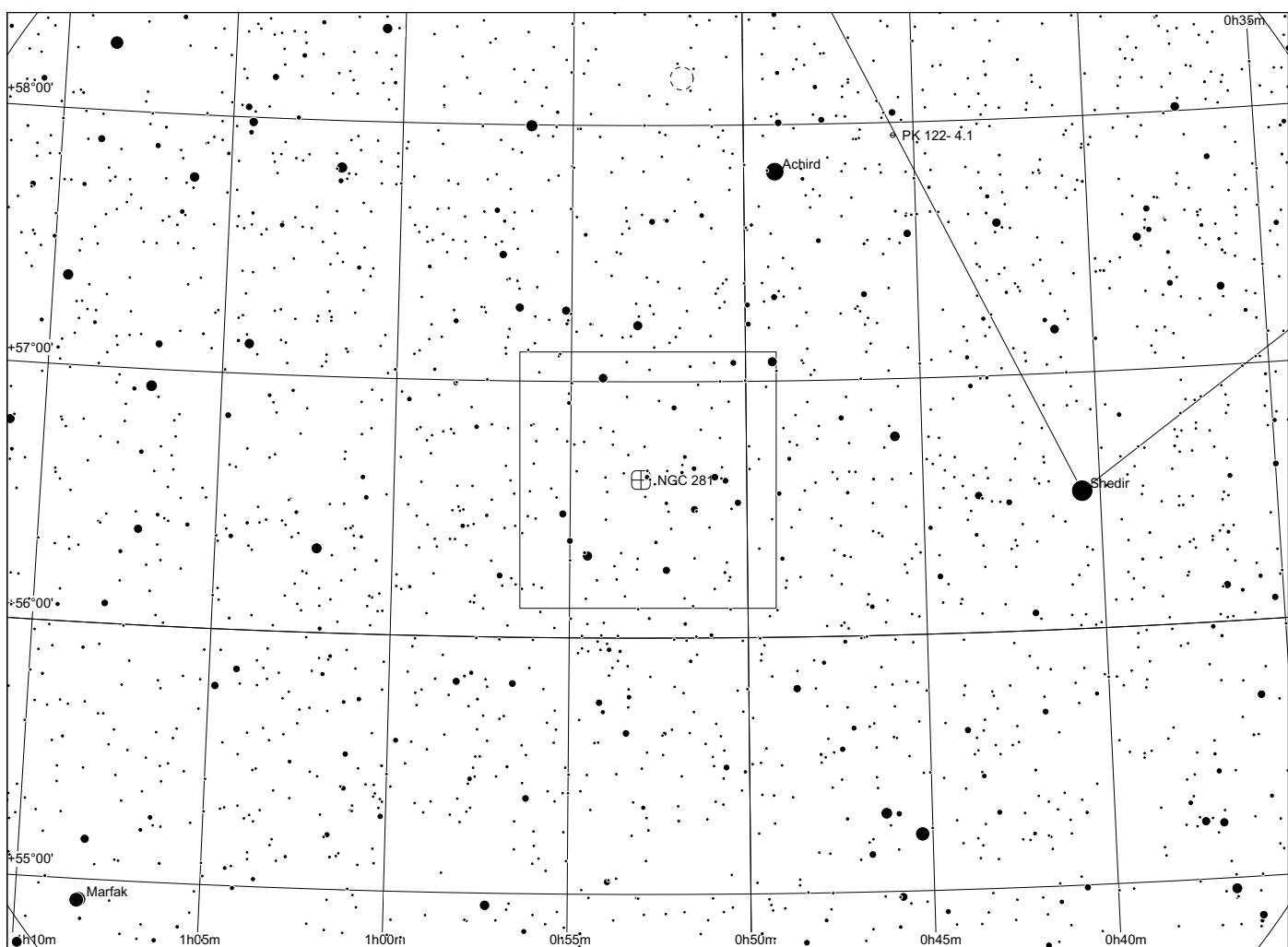
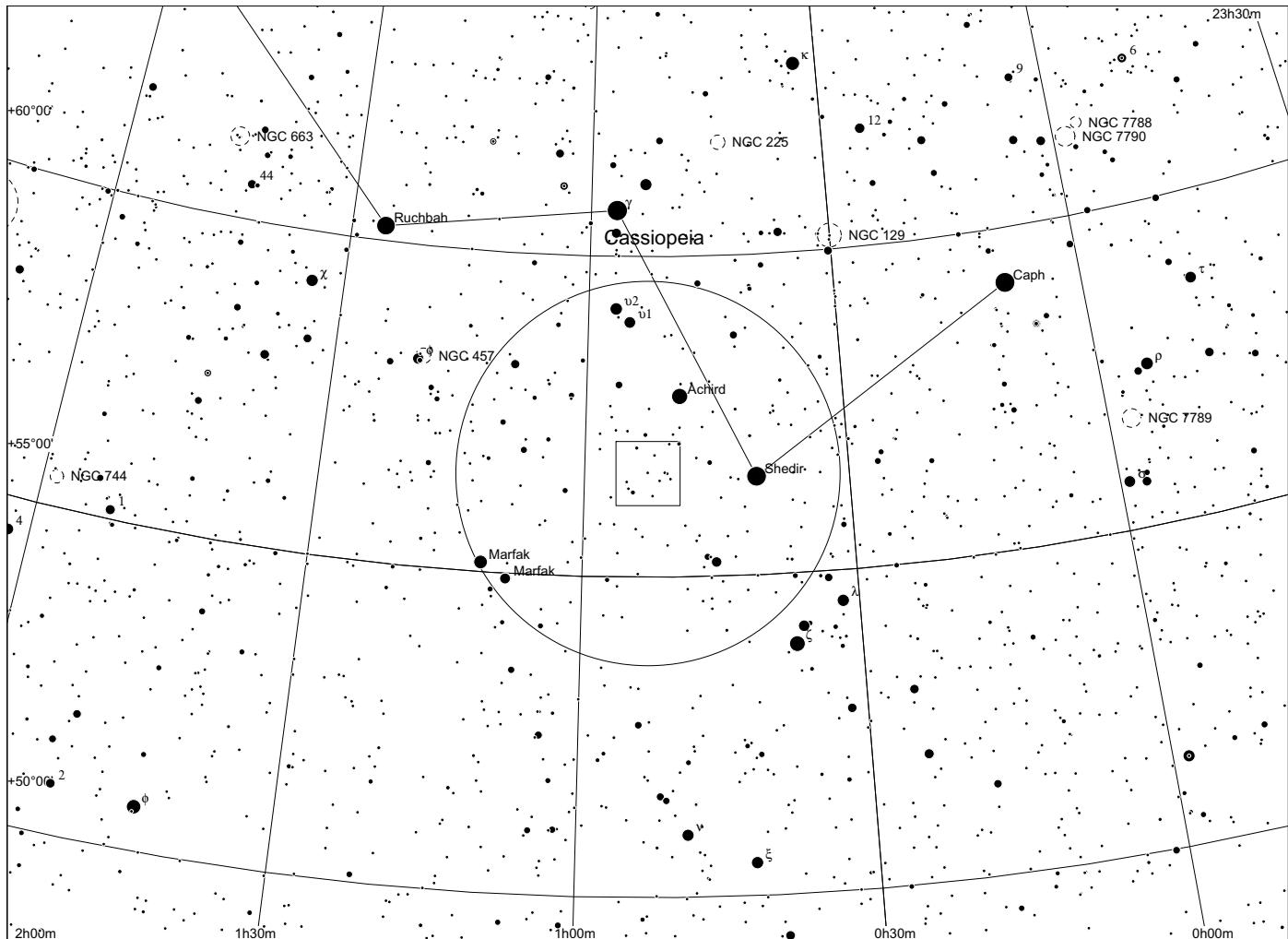
composite

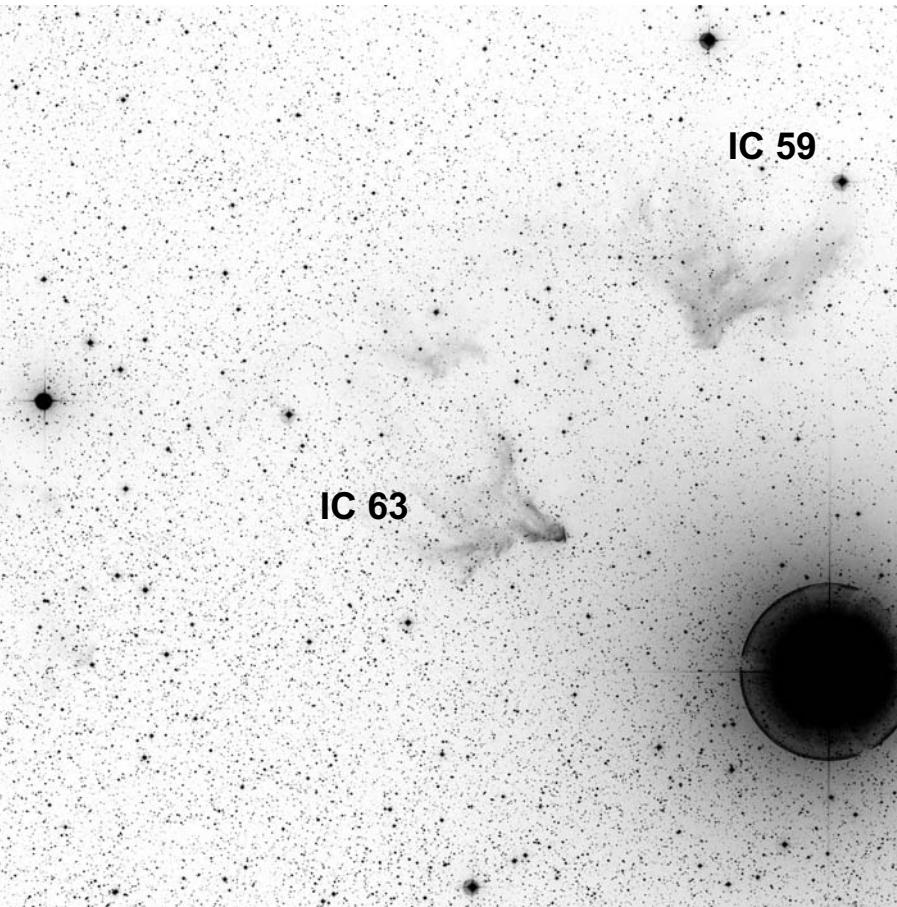
	other name	RA	dec	dia. '	F	S	B
Sh 2-184	NGC281	00 52 50.1	+56 36 37	40	3	2	3

Distance: 2386 pc, Size: 4.9 pc, Source: 2003A&A...397..213P

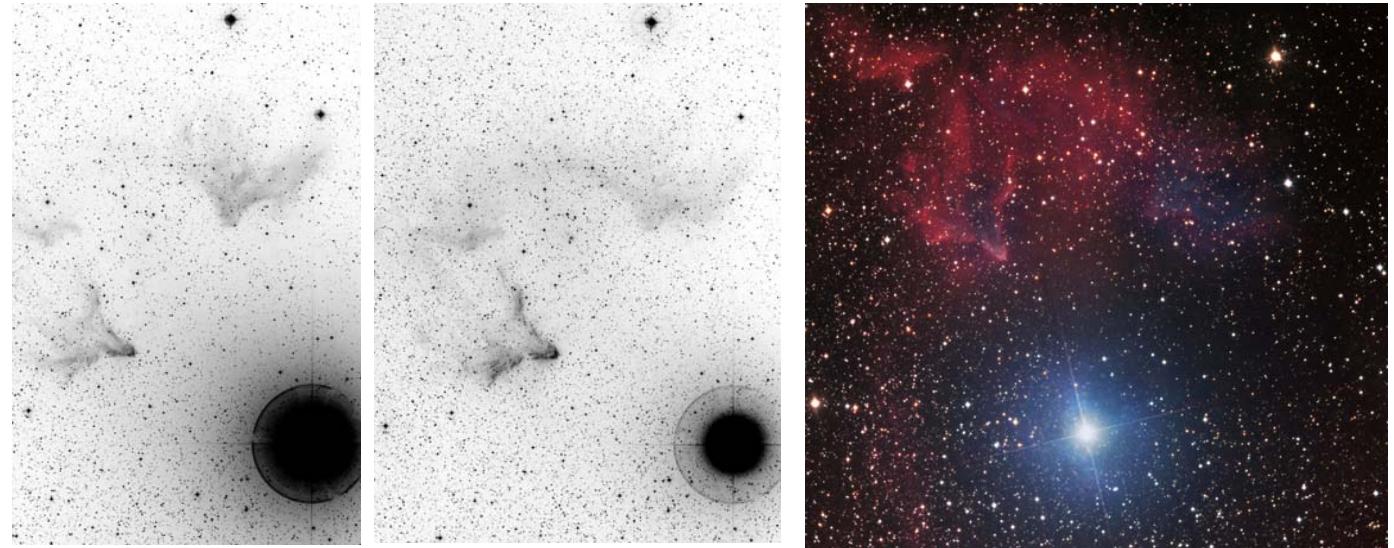
Often called NGC 281, this bright nebula located far below the galactic plane is also nicknamed the Pac Man nebula by amateur astronomers. IC 1590, the star cluster at the heart of the nebula, is about 3.5 million years old. The core of the star cluster IC 1590 is the O6 class trapezium system HD 5005, which ionises Sh 2-184.

Observing notes:





Sh 2 - 185
in Cassiopeia

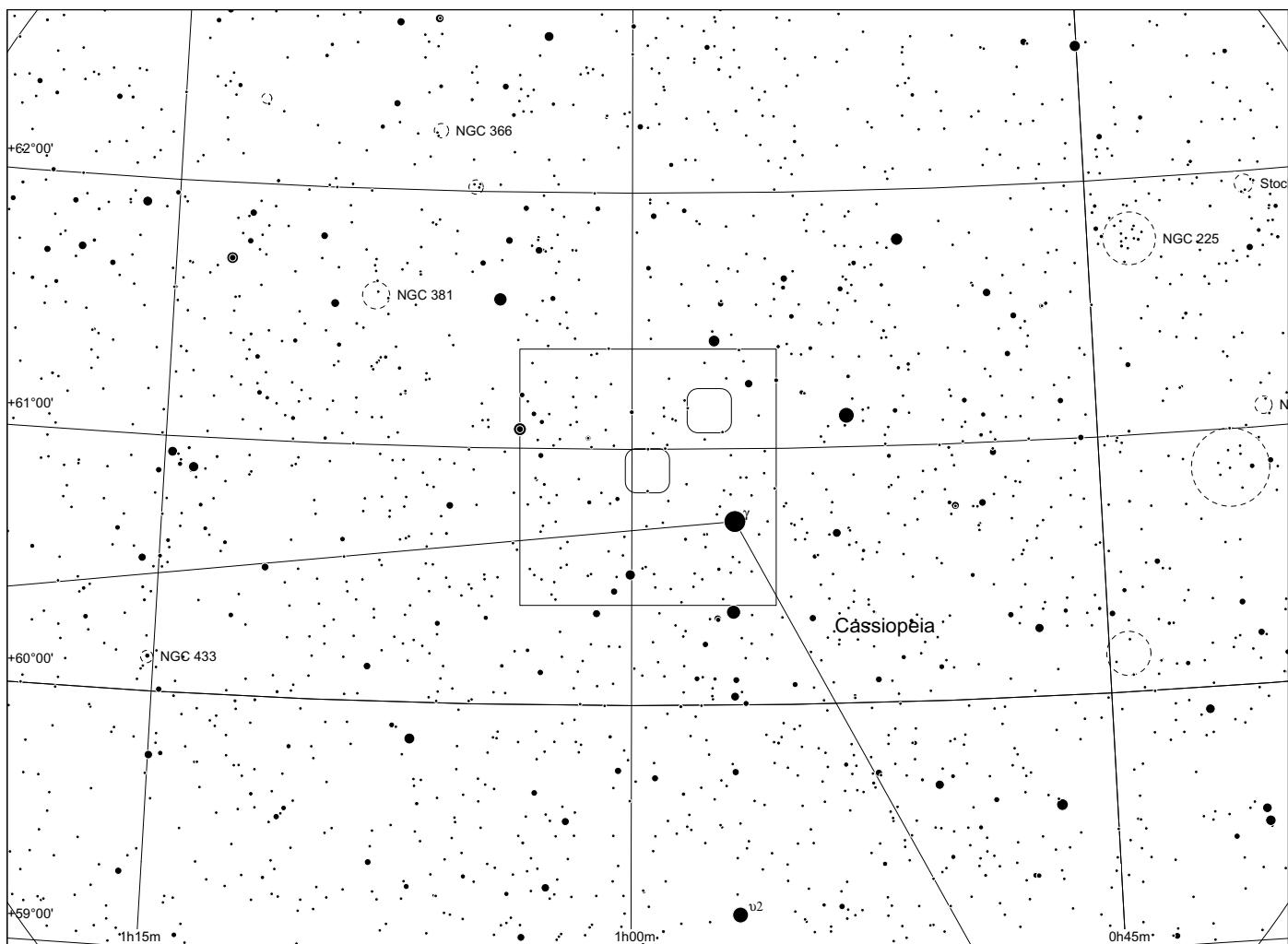
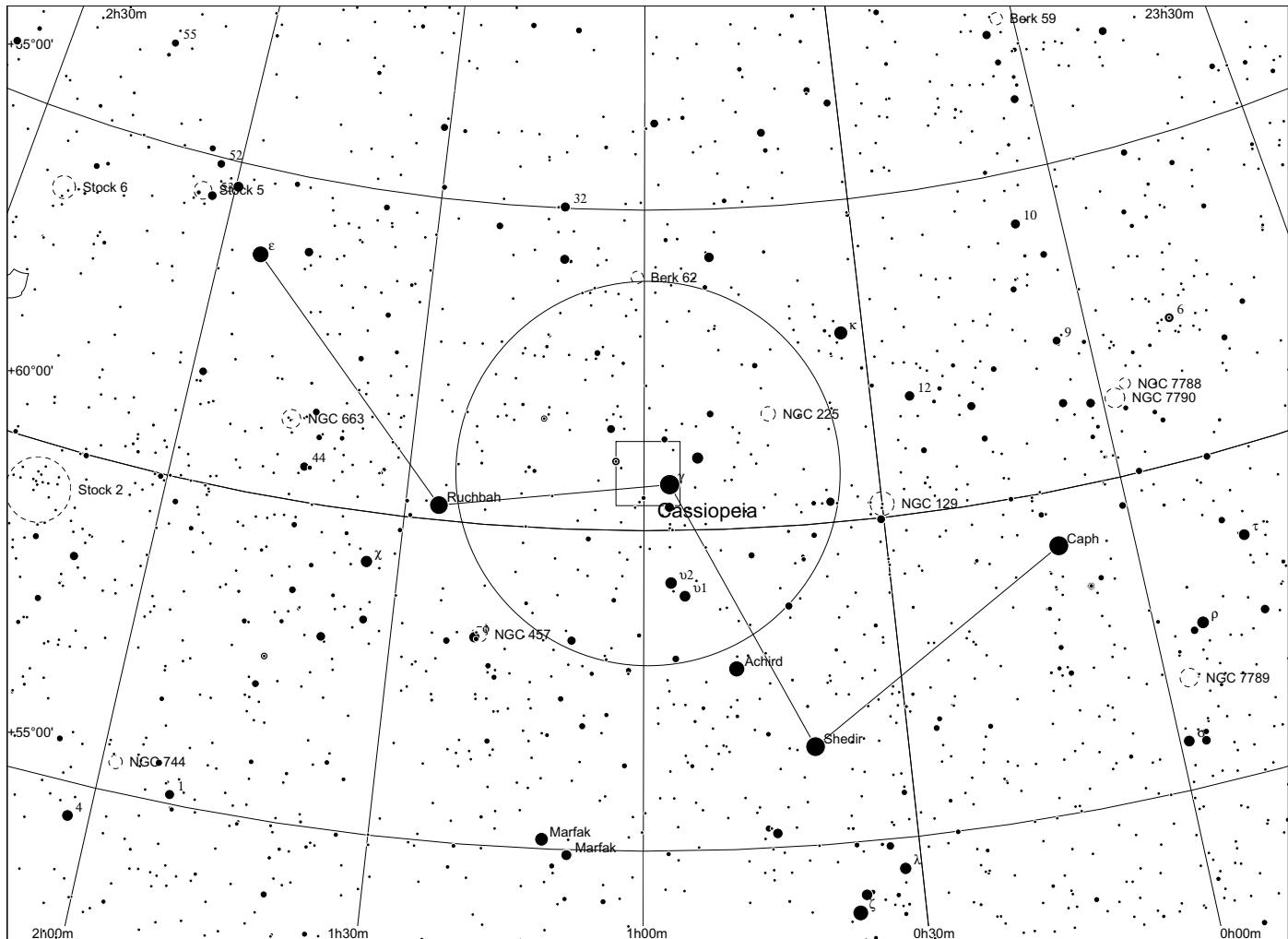


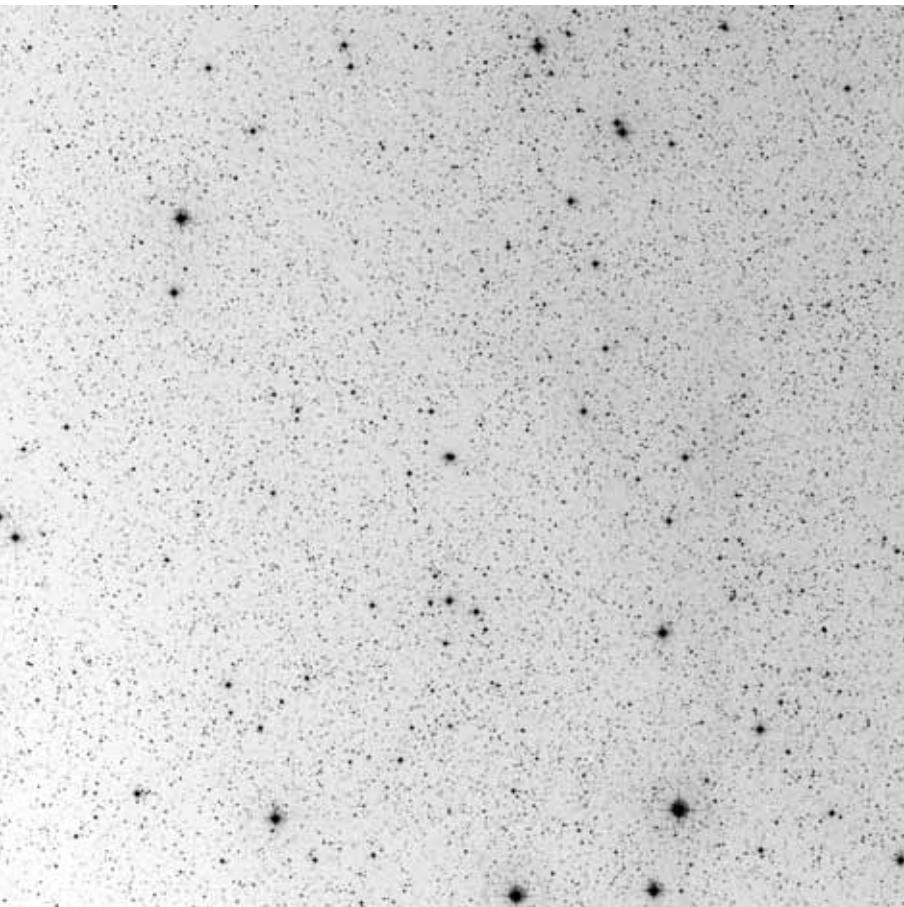
	other name	RA	dec	dia. '	F	S	B
Sh 2-185	IC 59/63	00 60 00.0	+60 59 23	120	3	2	2

Distance: 210 pc, Size: 7.3 pc, Source: 1982ApJS...49..183B

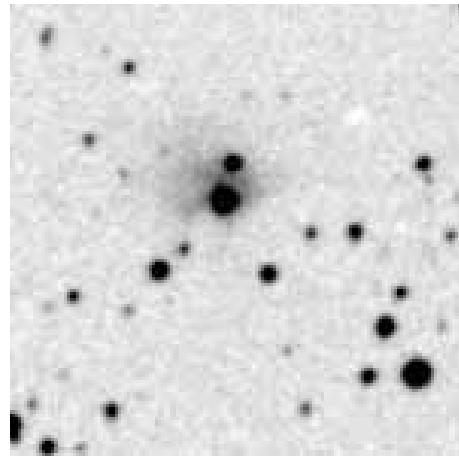
This region consists of IC 59, IC 61, IC 63 and gamma Cassiopeiae. It is a combination of a reflection nebula and HII region.

Observing notes:

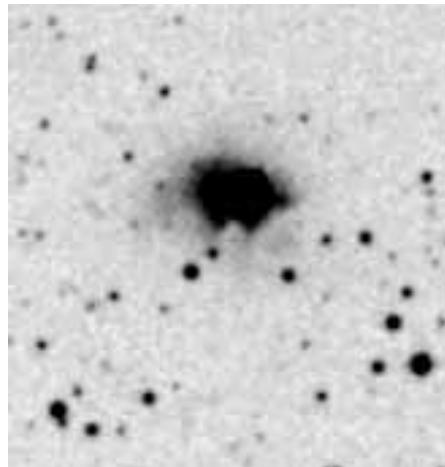




**Sh 2 - 186
in Cassiopeia**



POSS blue



POSS red

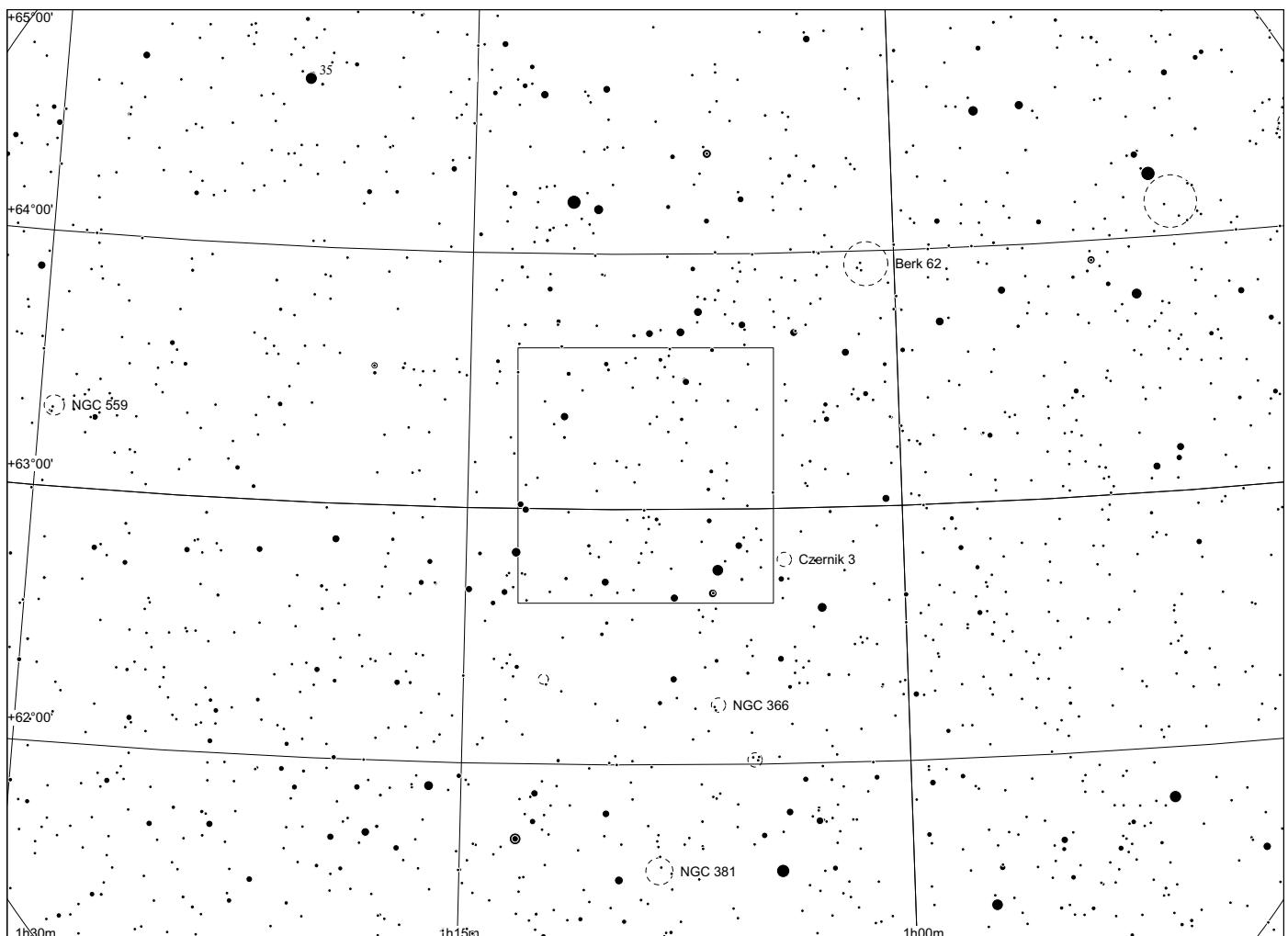
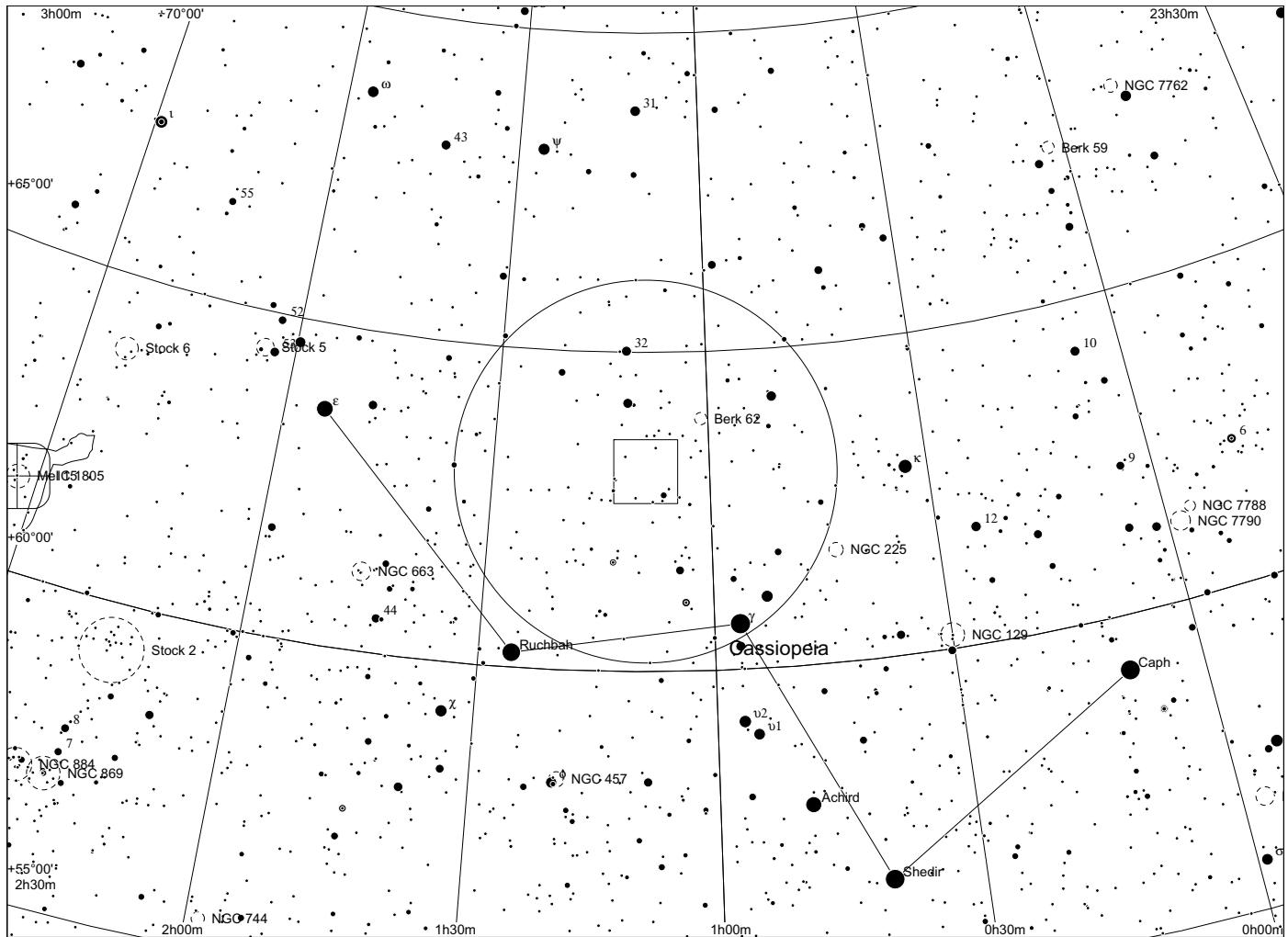


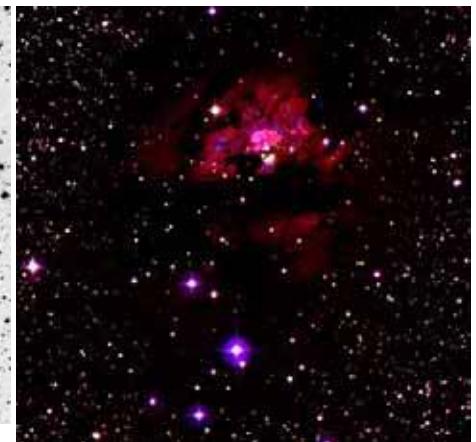
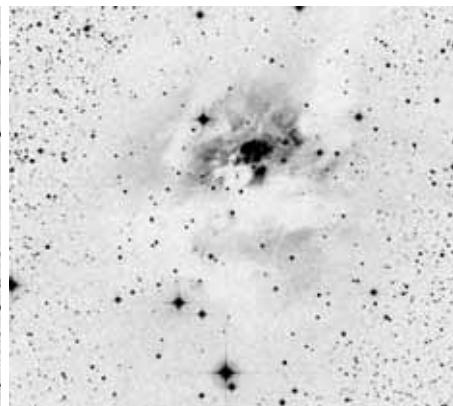
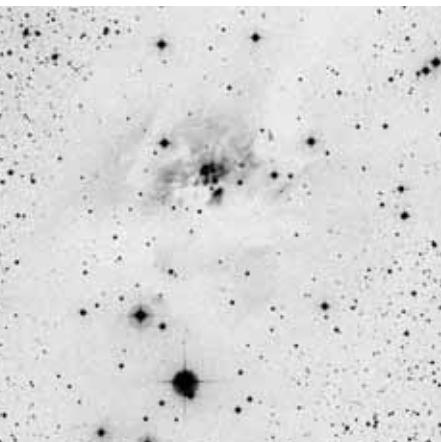
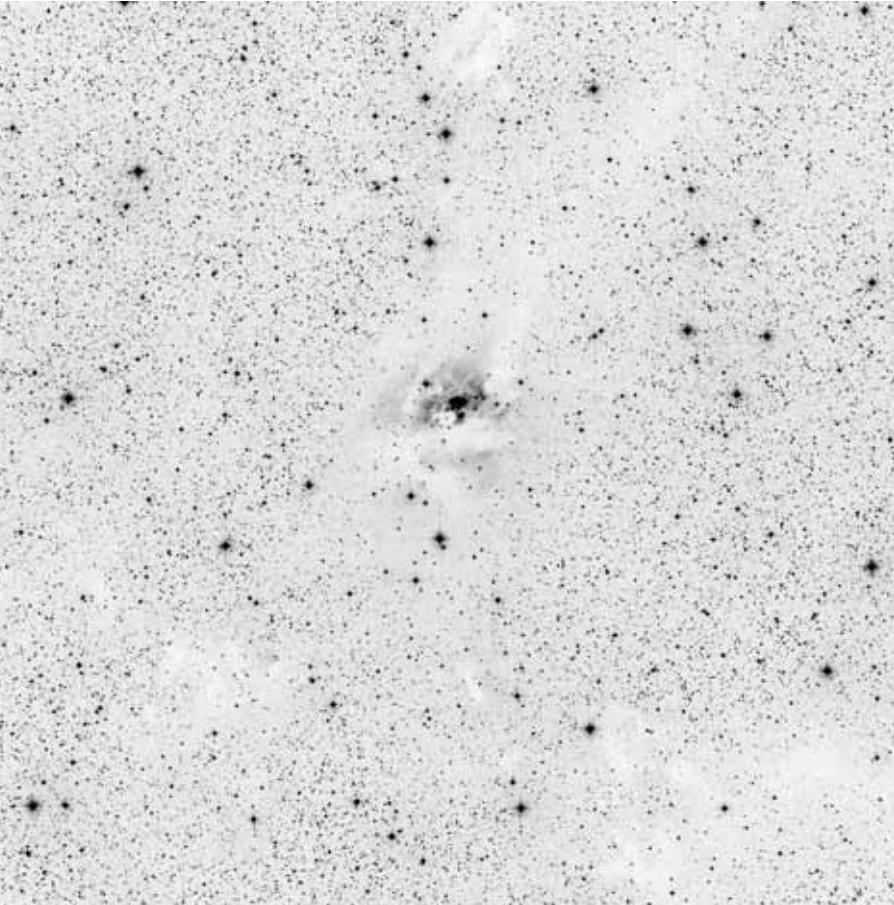
composite

	other name	RA	dec	dia. '	F	S	B
Sh 2-186		01 08 50.7	+63 08 02	1	3	2	2

Distance: 2600 pc, Size: 0.8 pc, Source: 2003A&A...397..133R, Contains infrared cluster [BDS2003] 51.

Observing notes:





60x60, red

POSS blue

POSS red

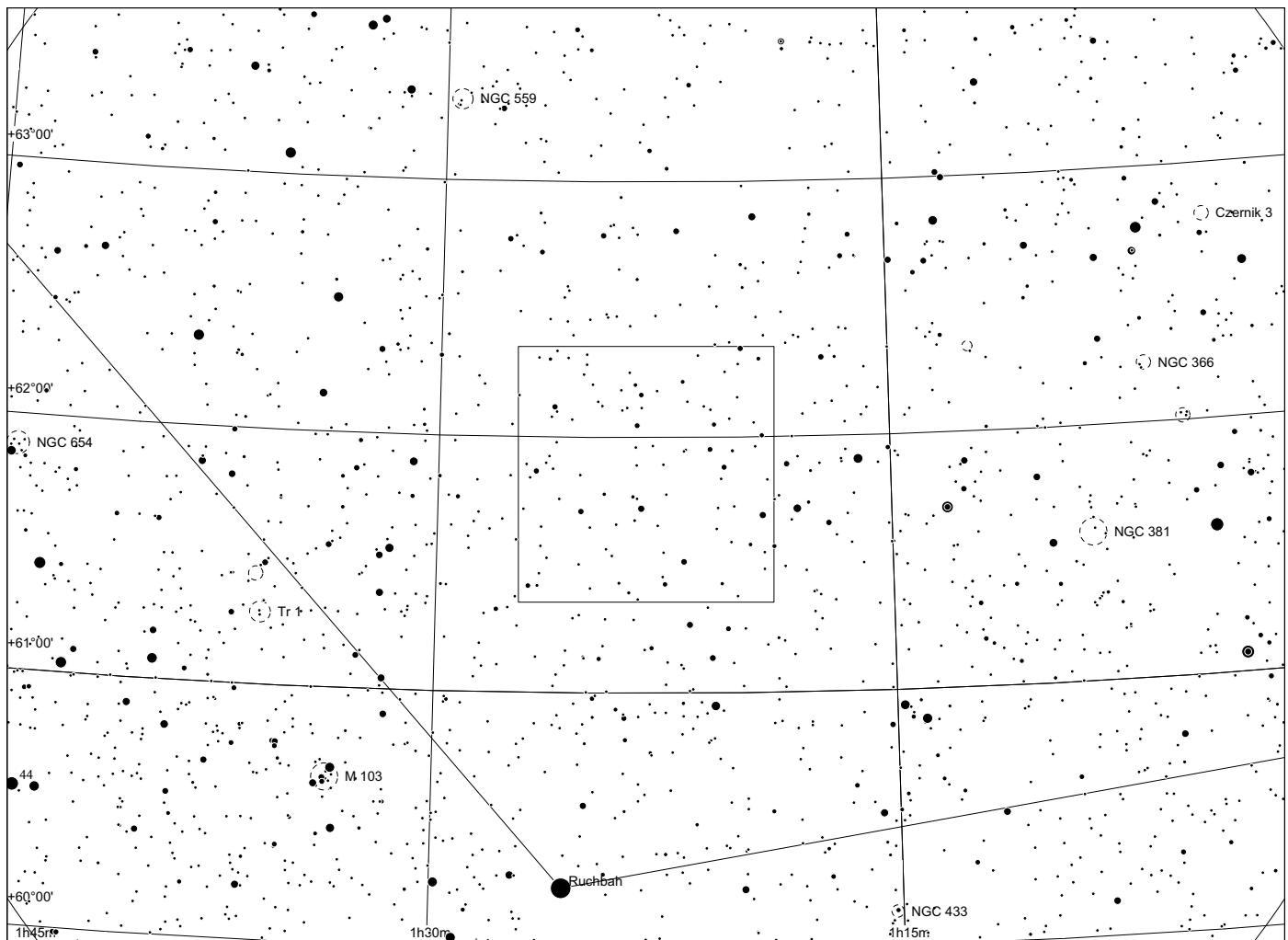
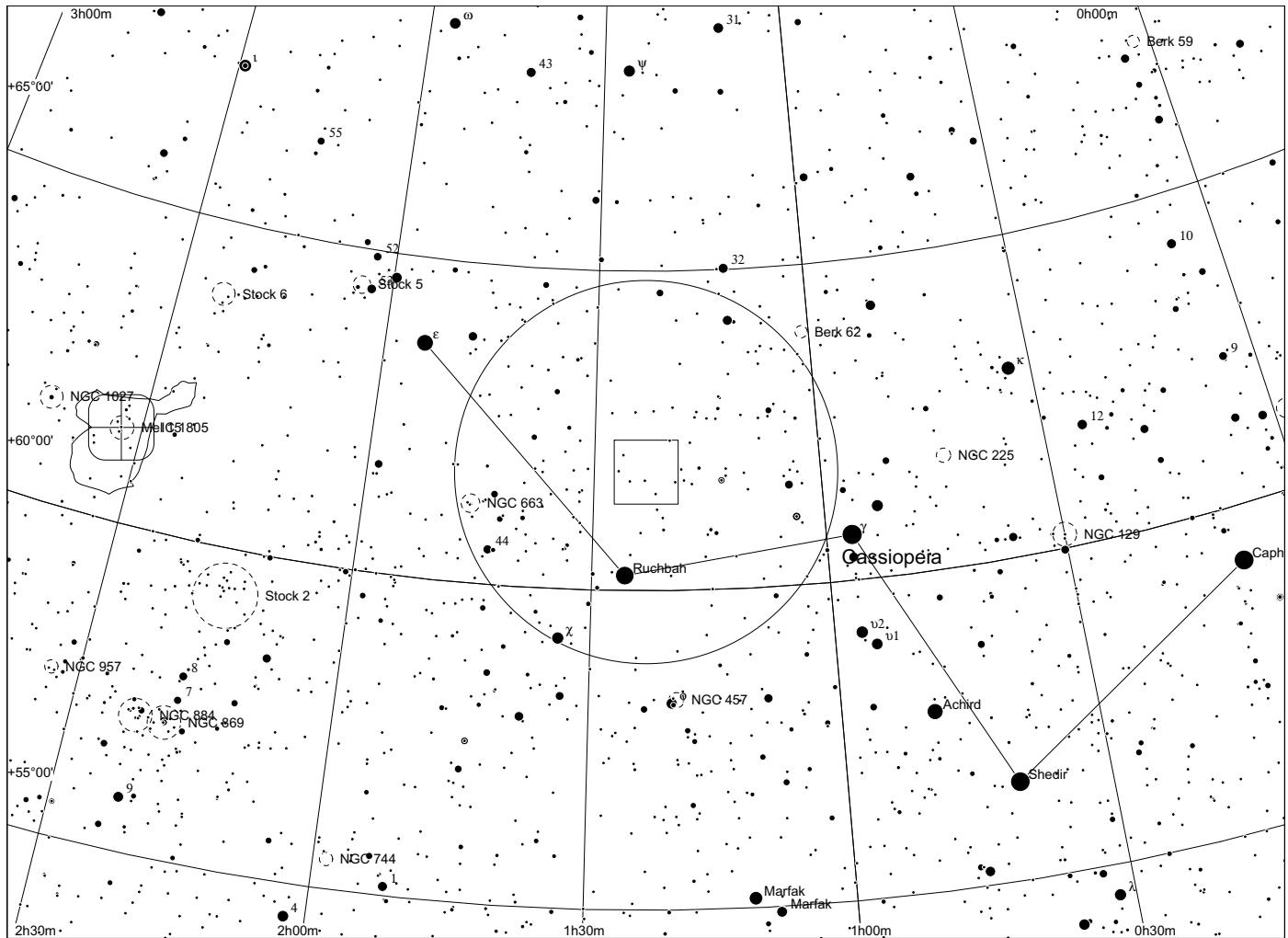
composite

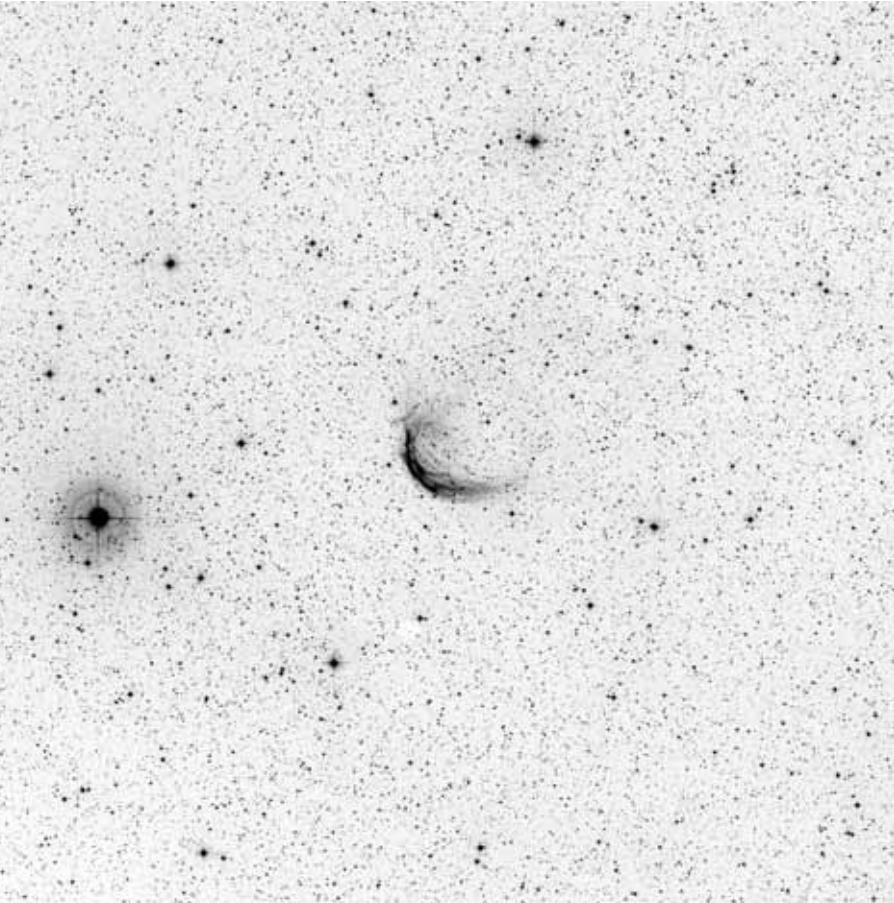
	other name	RA	dec	dia. '	F	S	B
Sh 2-187		01 23 07.0	+61 51 24	10	3	3	2

Distance: 1000 pc, Size: 2.9 pc, Source: 2001AJ....122..313J

This young (100-200 thousand years) star formation region is most likely ionised by a B0 star and is surrounded by a 4600 solar mass molecular cloud.

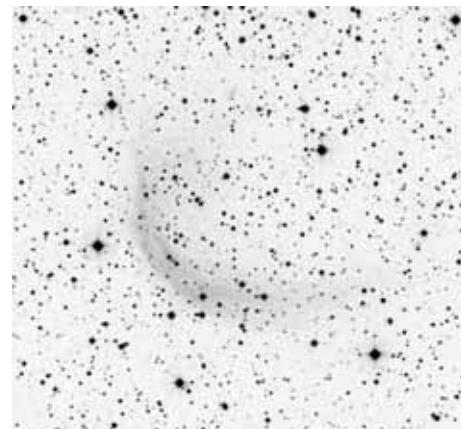
Observing notes:



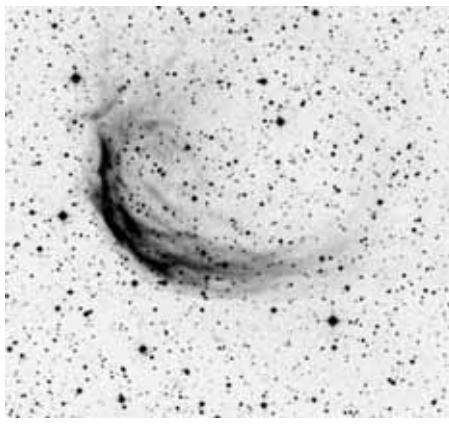


**Sh 2 - 188
in Cassiopeia**

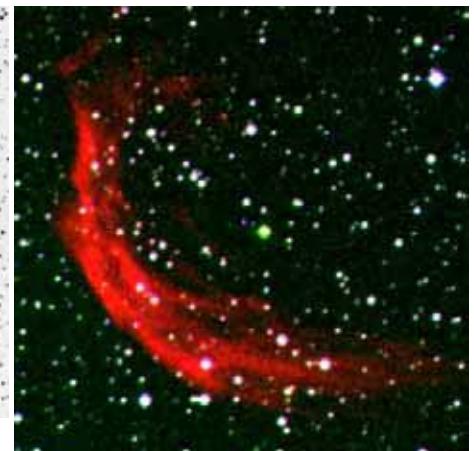
60x60, red



POSS blue



POSS red

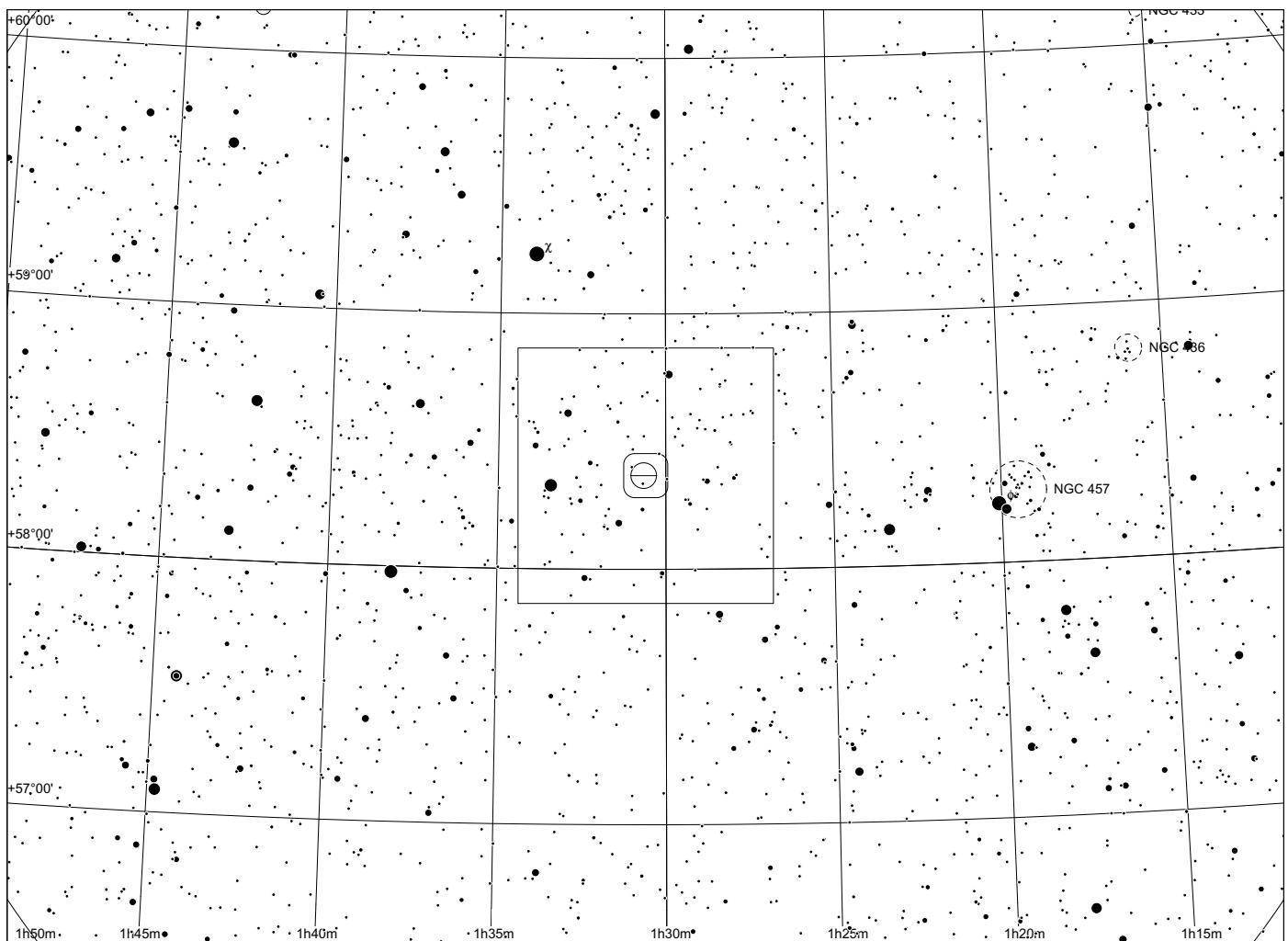
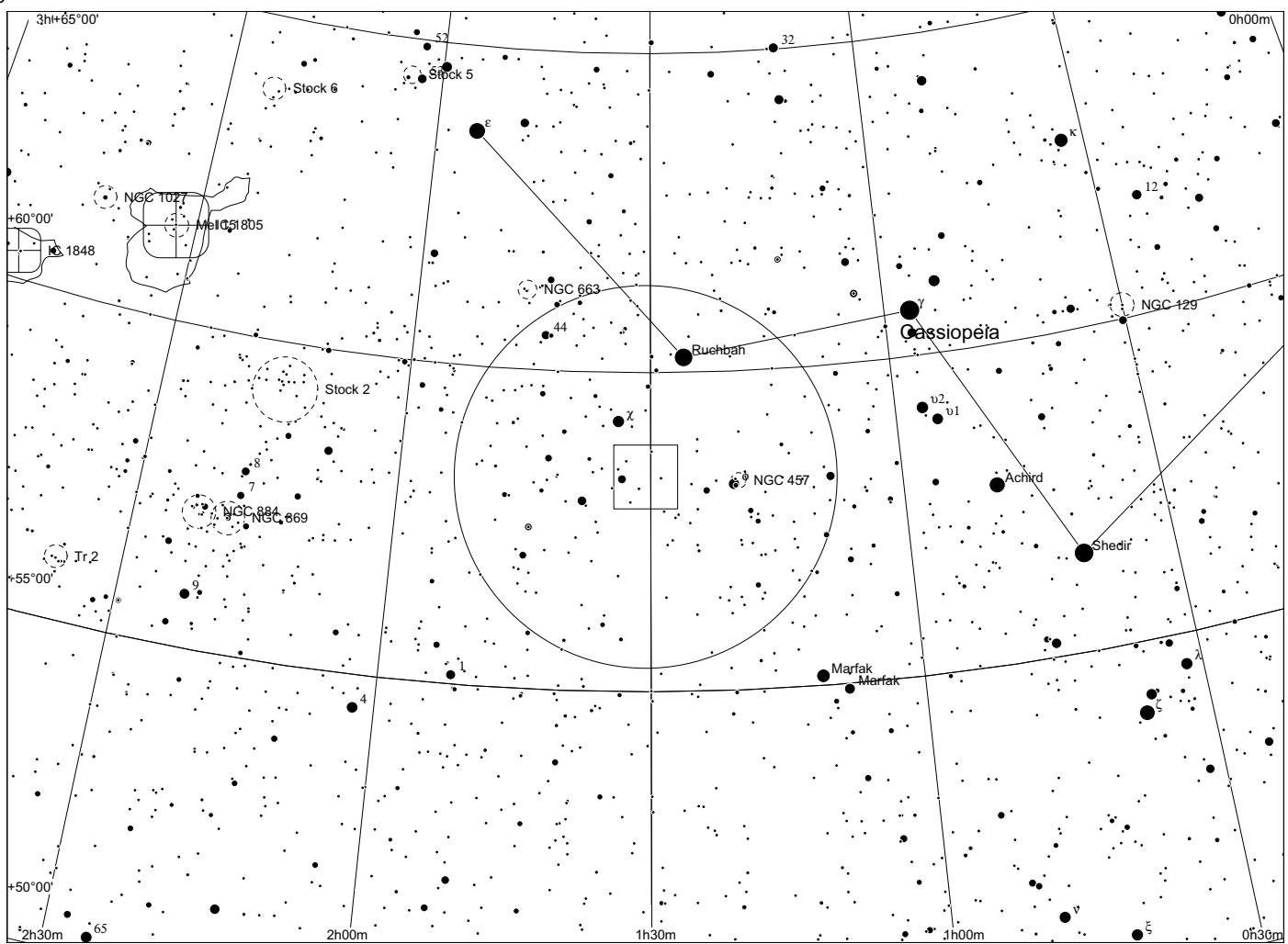


composite

	other name	RA	dec	dia. '	F	S	B
Sh 2-188	Simeis 22	01 30 38.6	+58 22 01	9	3	3	2

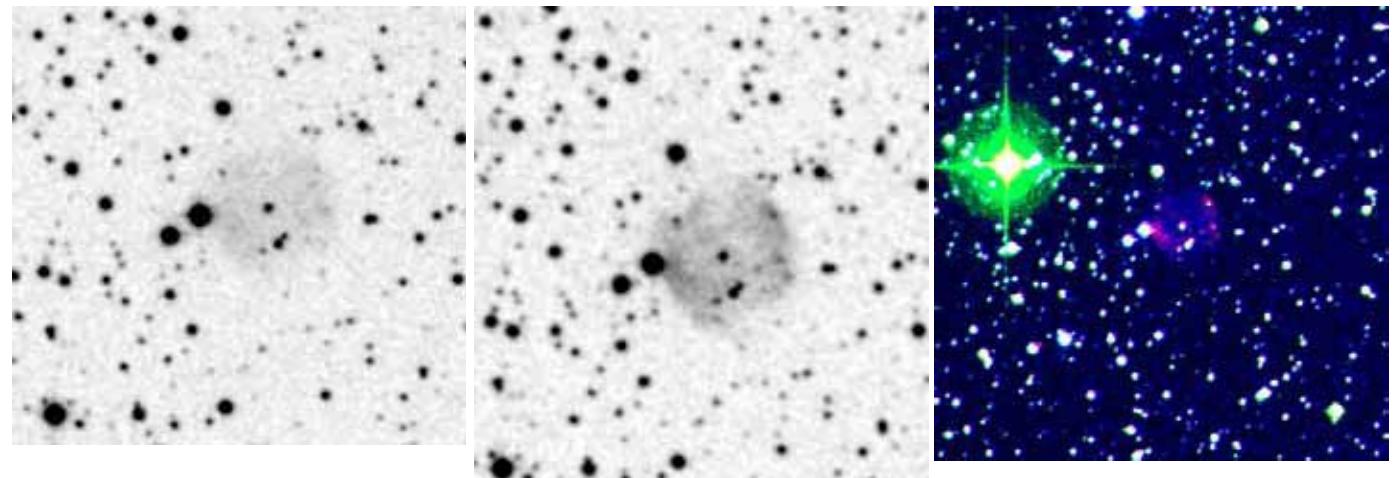
This is planetary nebula Simeis 22 with a distance of 218 pc and an expansion age of 7500 years.

Observing notes:





Sh 2 - 189
in Cassiopeia



POSS blue

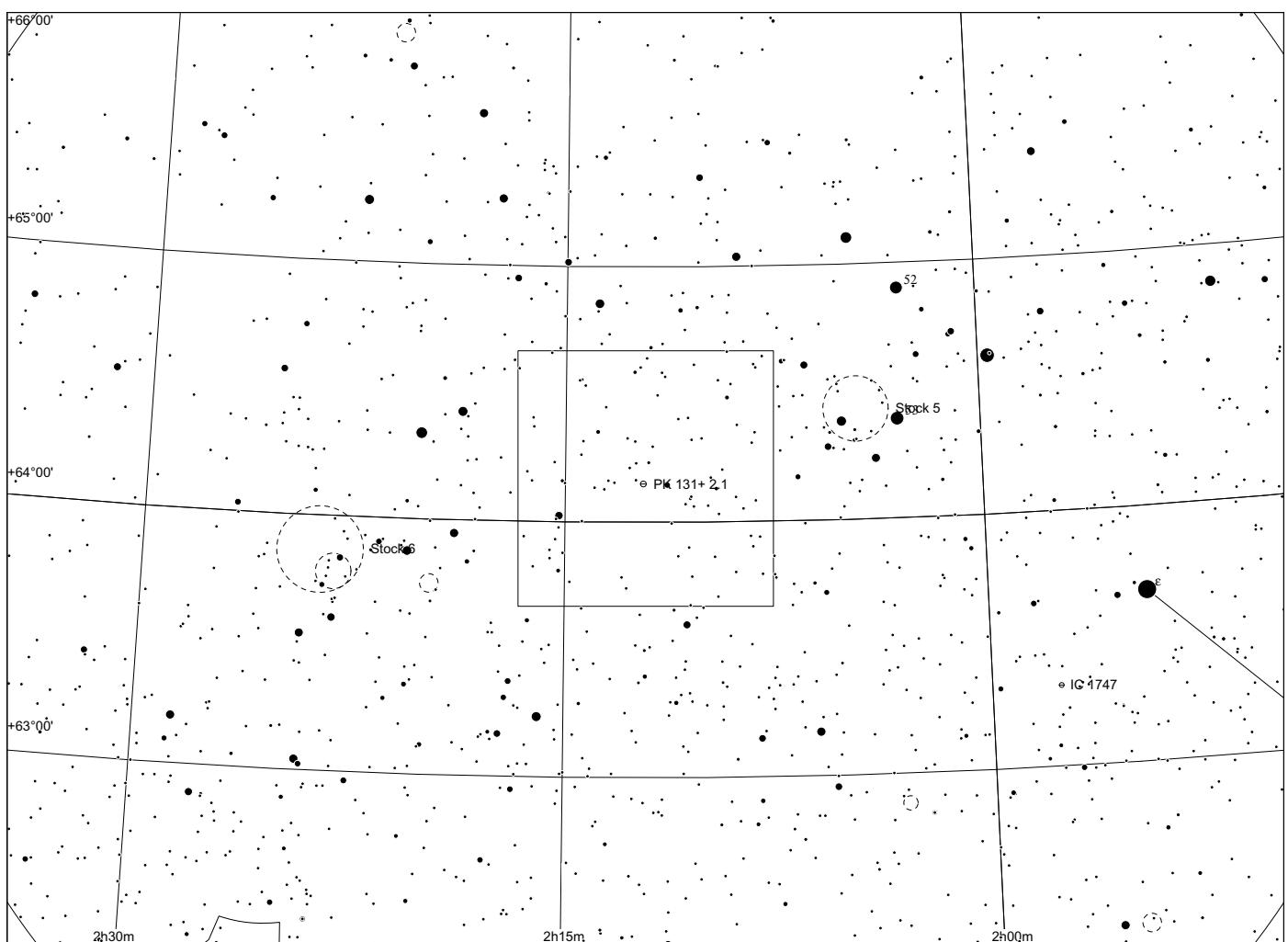
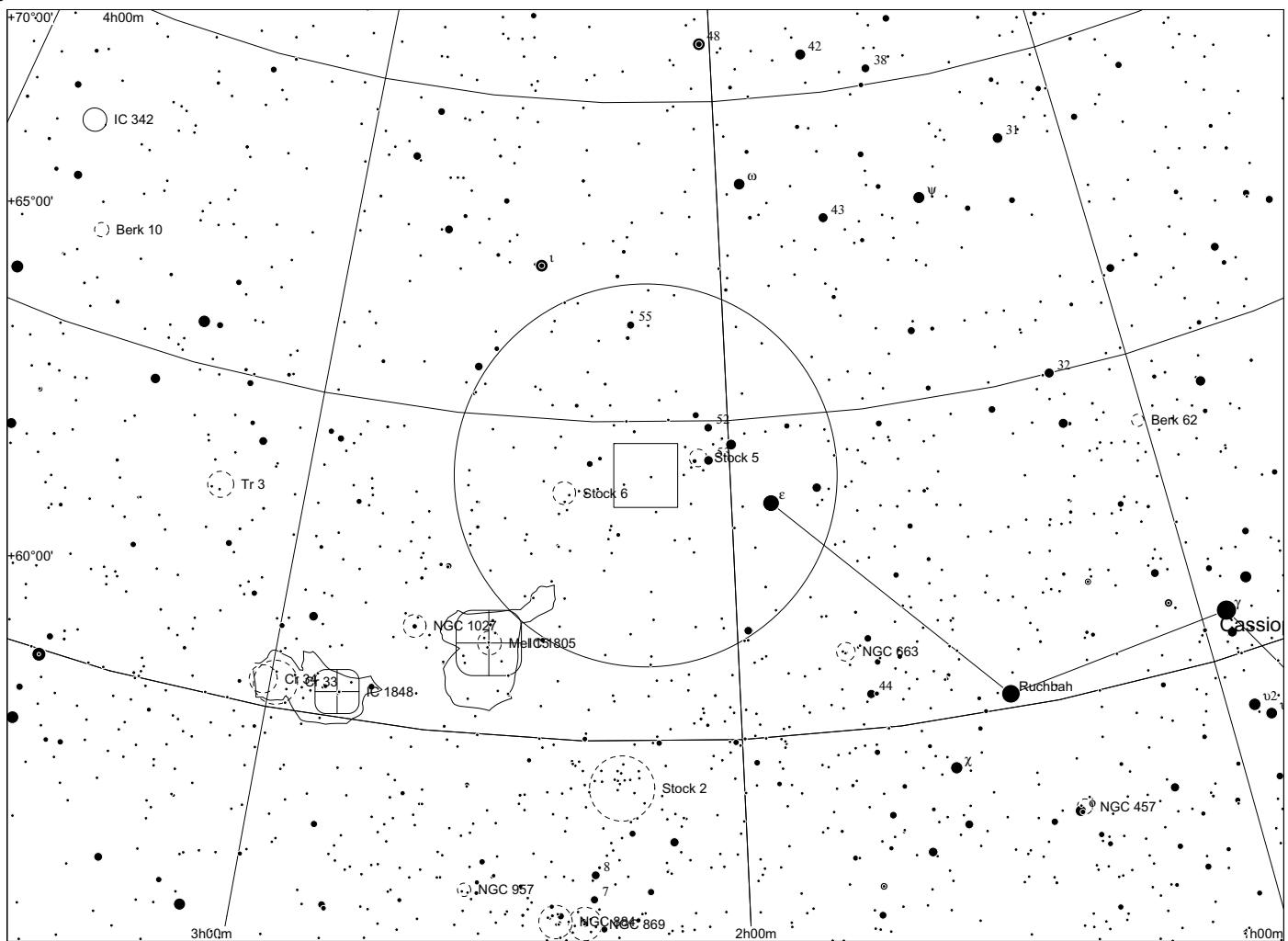
POSS red

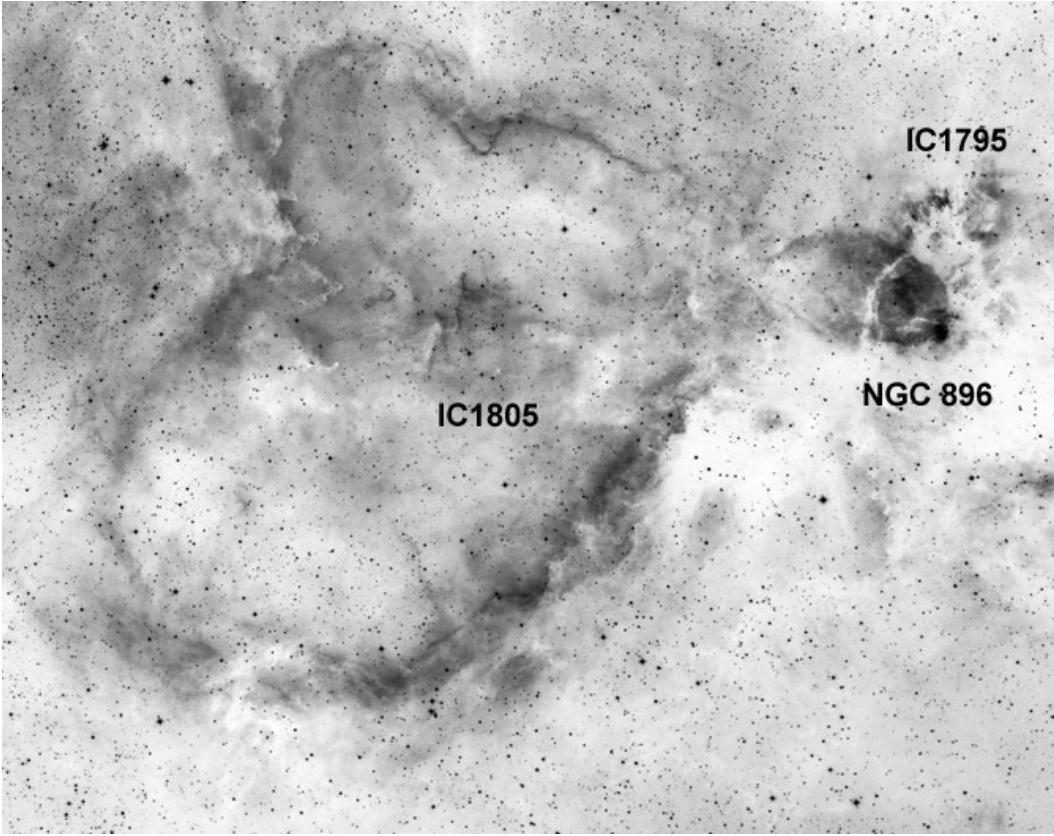
composite

	other name	RA	dec	dia. '	F	S	B
Sh 2-189	Abell 3	02 12 07.6	+64 10 18	2	1	1	1

This faint and distant purple ball is a planetary nebula also called Abell 3 that is located at a distance of 2000 pc.

Observing notes:





**Sh 2 - 190
in Cas**



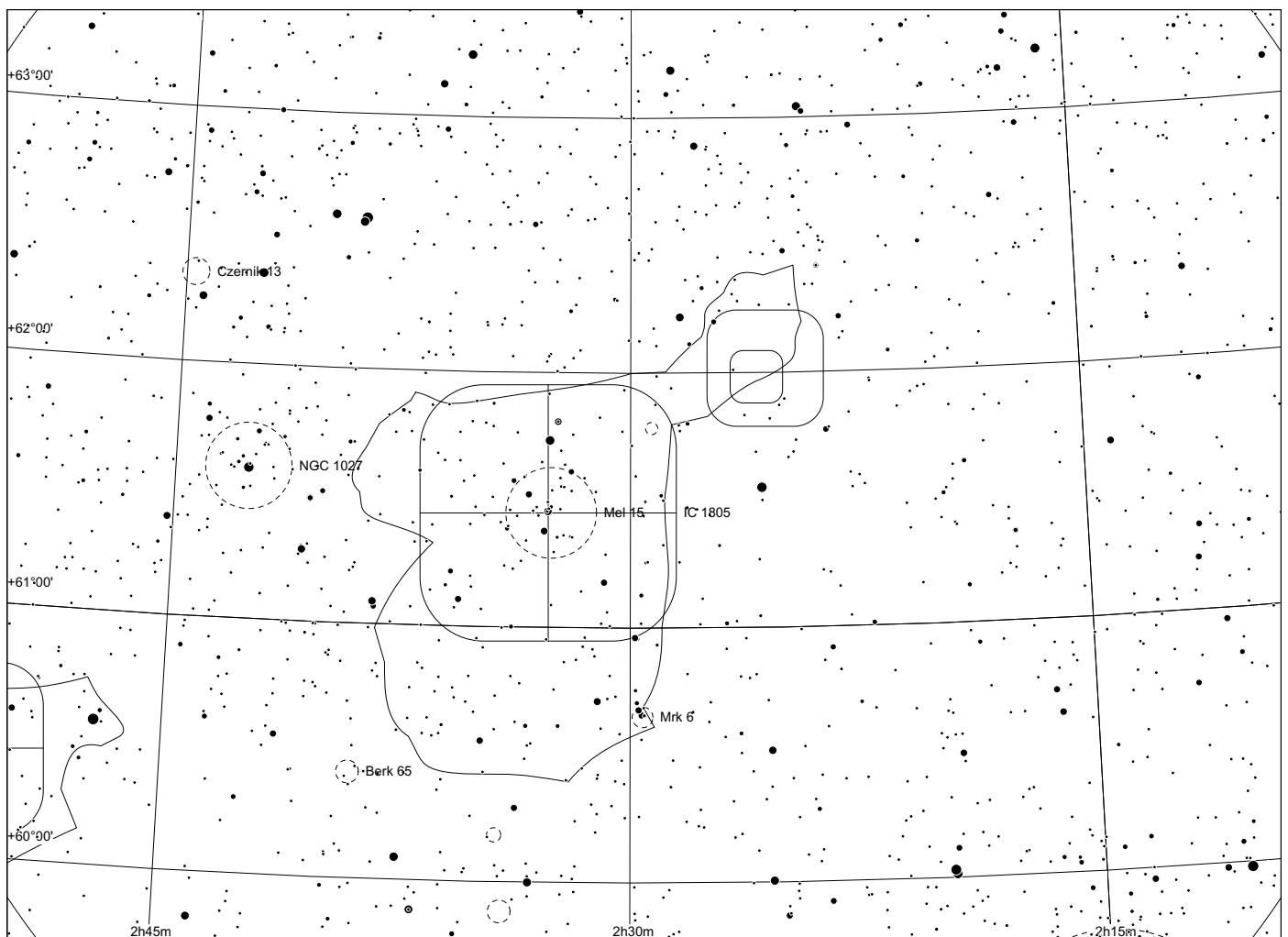
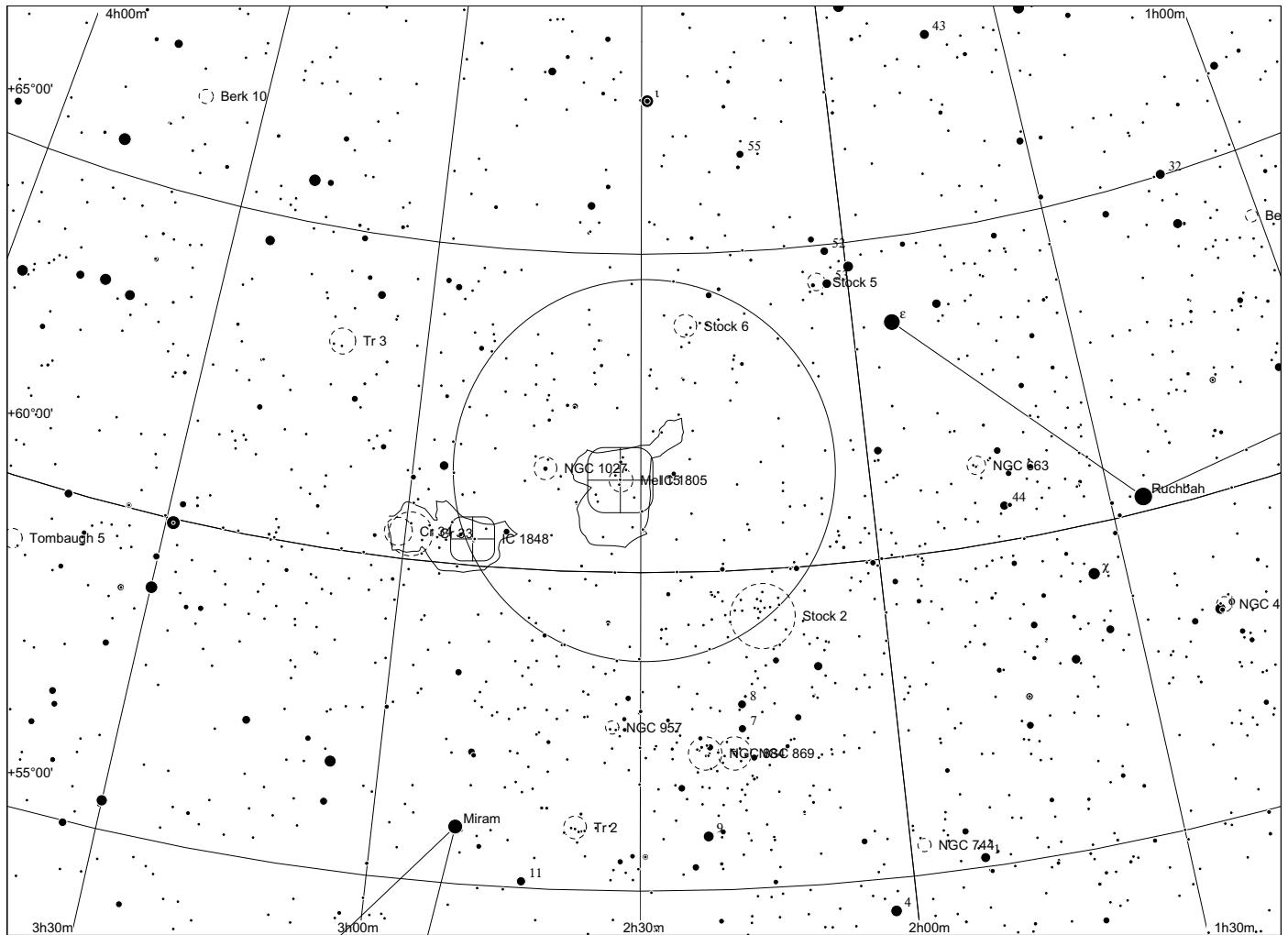
narrowband Dean Salman

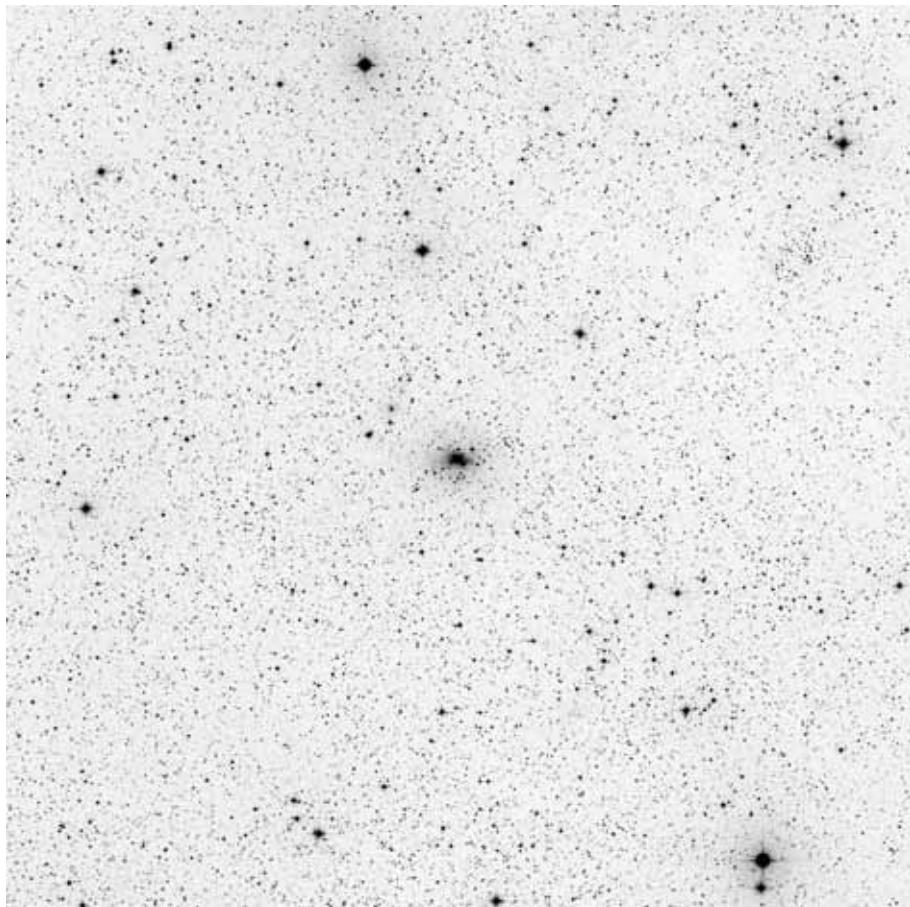
	other name	RA	dec	dia. '	F	S	B
Sh 2-190	IC 1805	02 33 22.7	+61 26 32	150	3	3	3

Distance: 2100 pc, Size: 91.6 pc, Source: 1982ApJS...49..183B

The Heart nebula is associated with the IC 1805 star cluster and the W3/W4 radio source / star formation region.

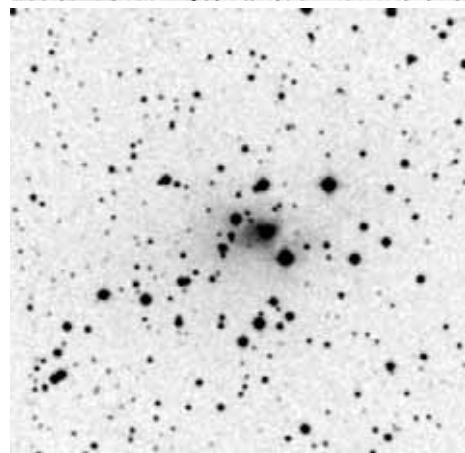
Observing notes:



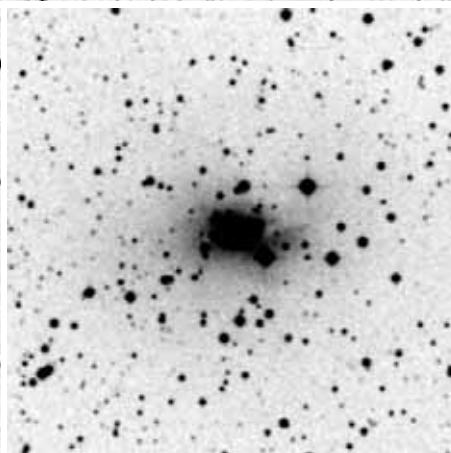


**Sh 2 - 191
in Cassiopeia**

60x60, red



POSS blue



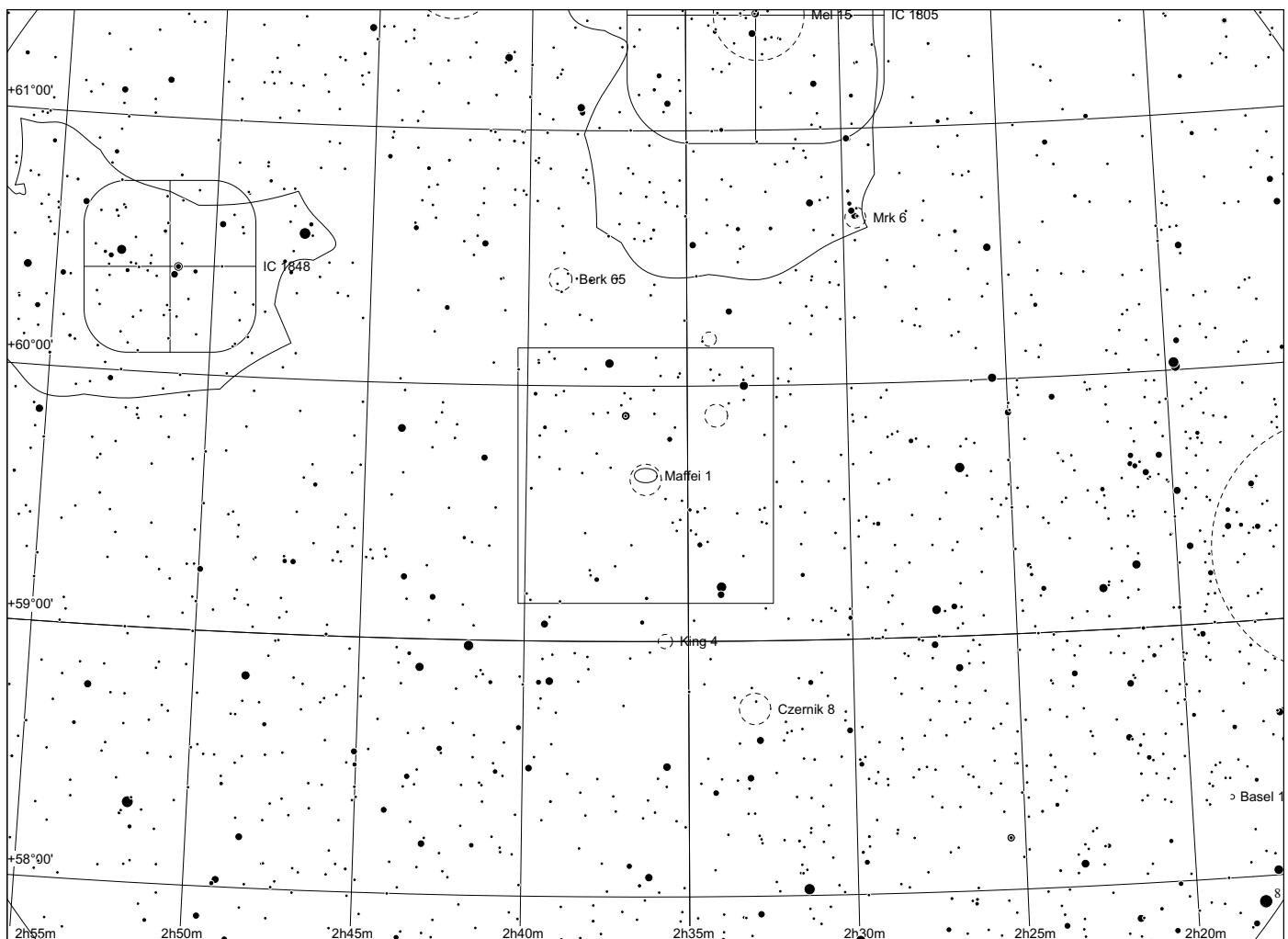
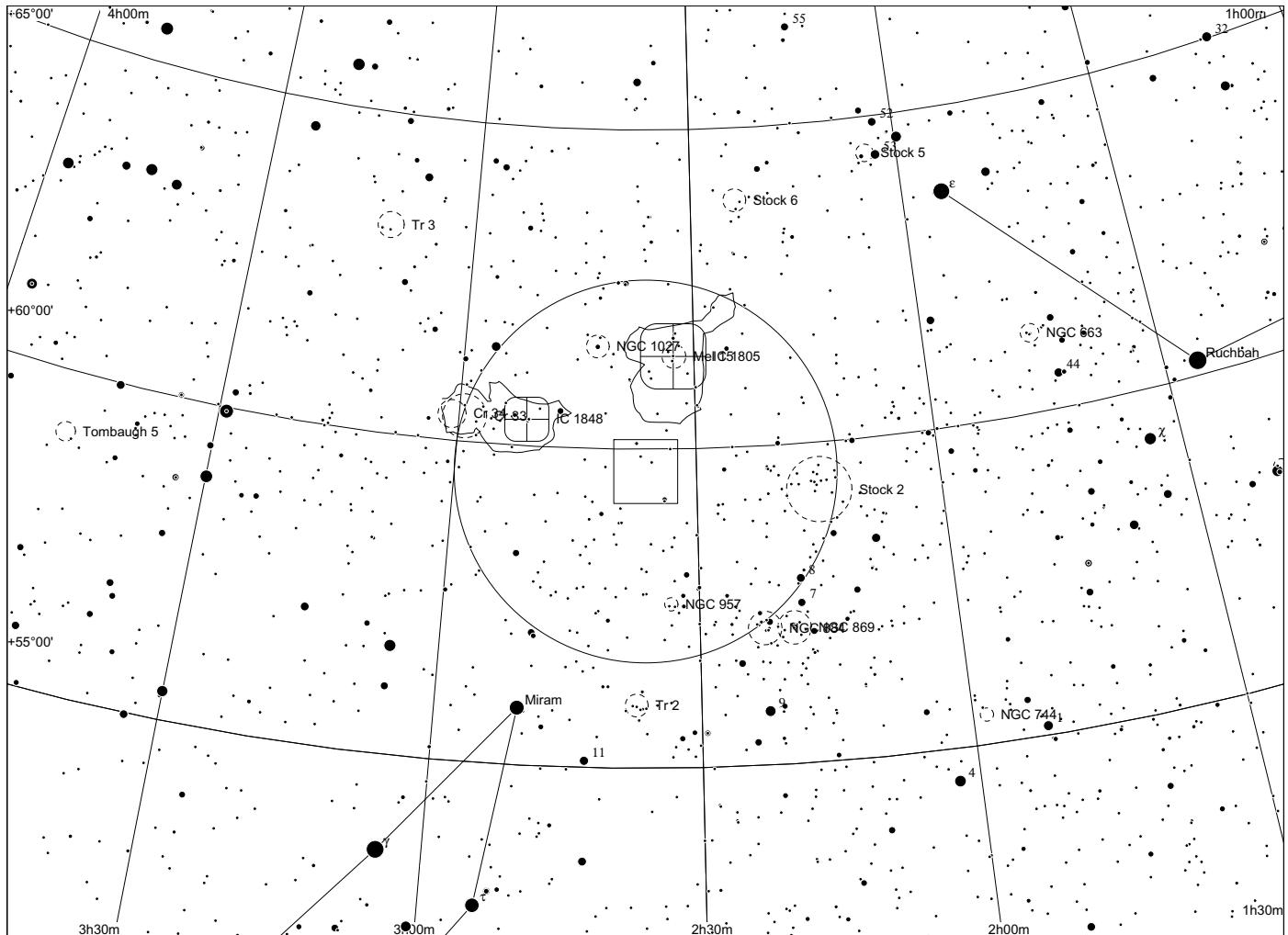
POSS red

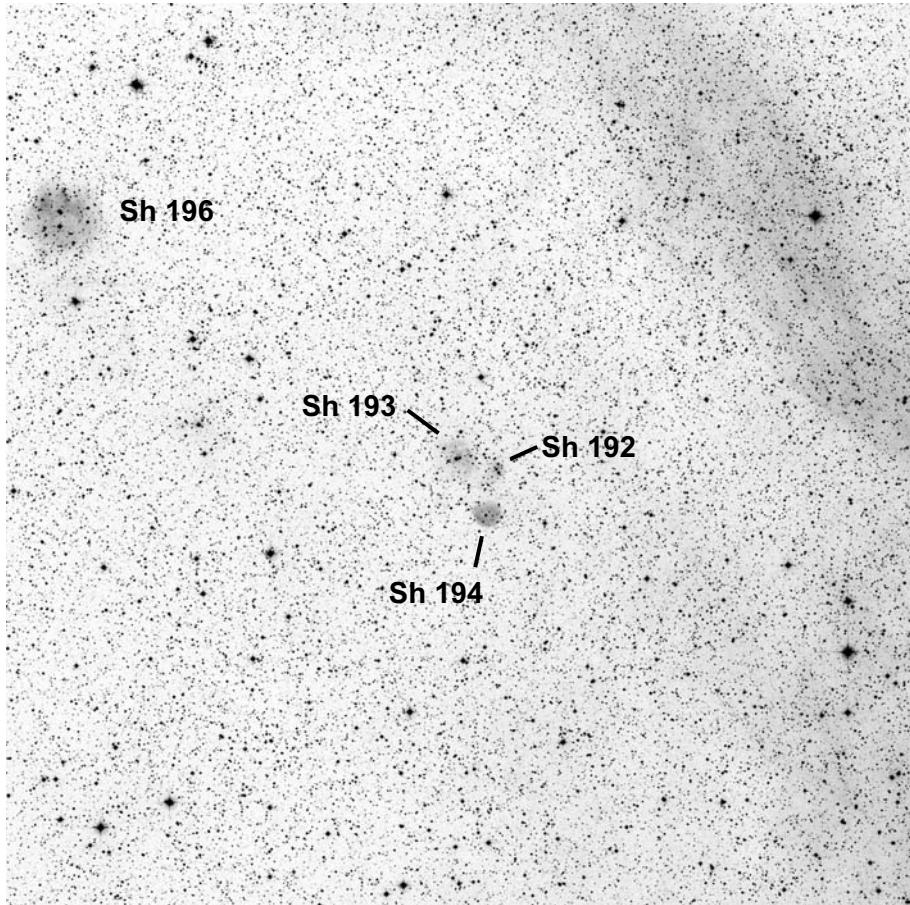
composite

	other name	RA	dec	dia. '	F	S	B
Sh 2-191	Maffei I	02 36 38.7	+59 38 14	2	3	1	3

This is the galaxy Maffei 1.

Observing notes:





**Sh 2 - 192/193/194
in Cassiopeia**

60x60, red



POSS blue

POSS red

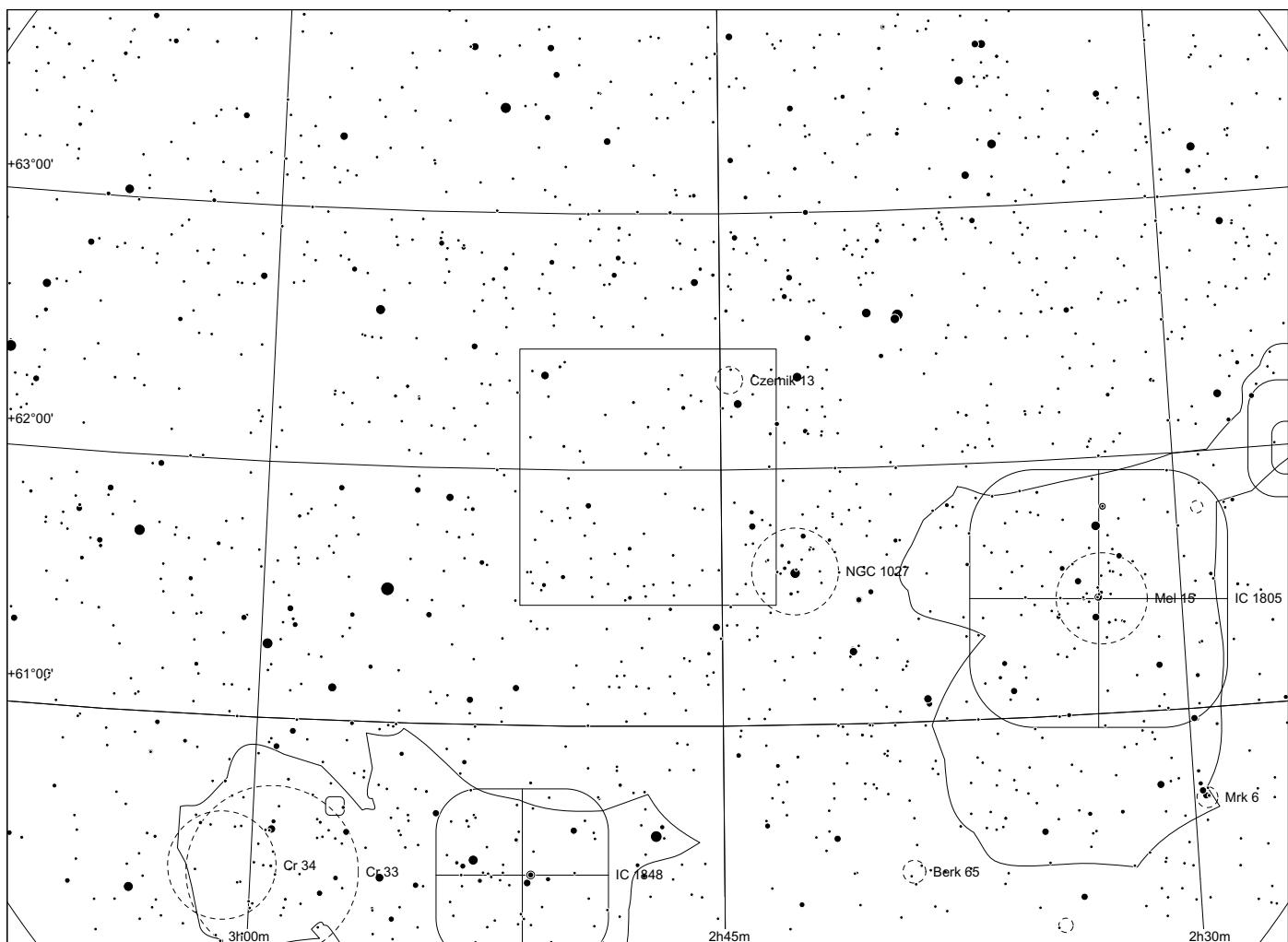
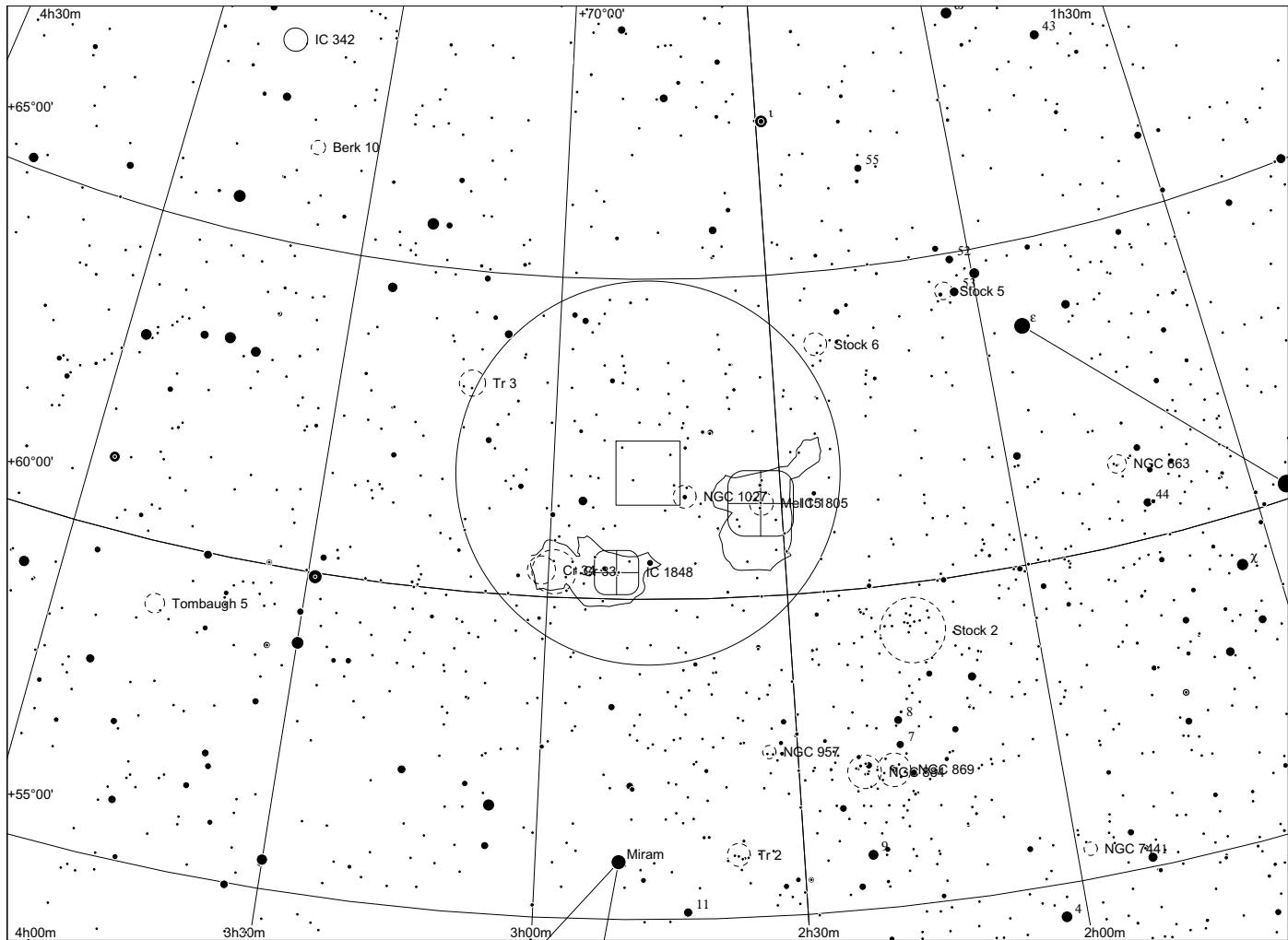
composite

	other name	RA	dec	dia. '	F	S	B
Sh 2-192		02 47 13.3	+61 59 17	1	2	1	1
Sh 2-193		02 47 32.5	+62 00 15	2	2	1	1
Sh 2-194		02 47 19.1	+61 56 17	2	2	1	2

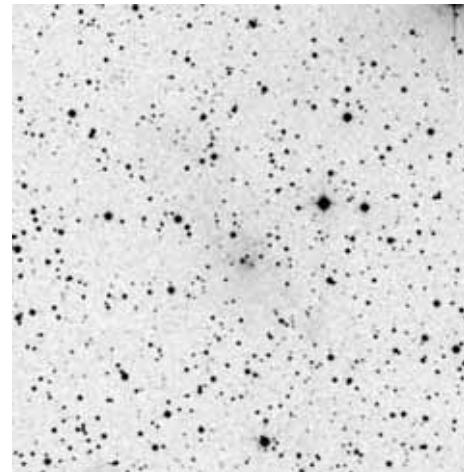
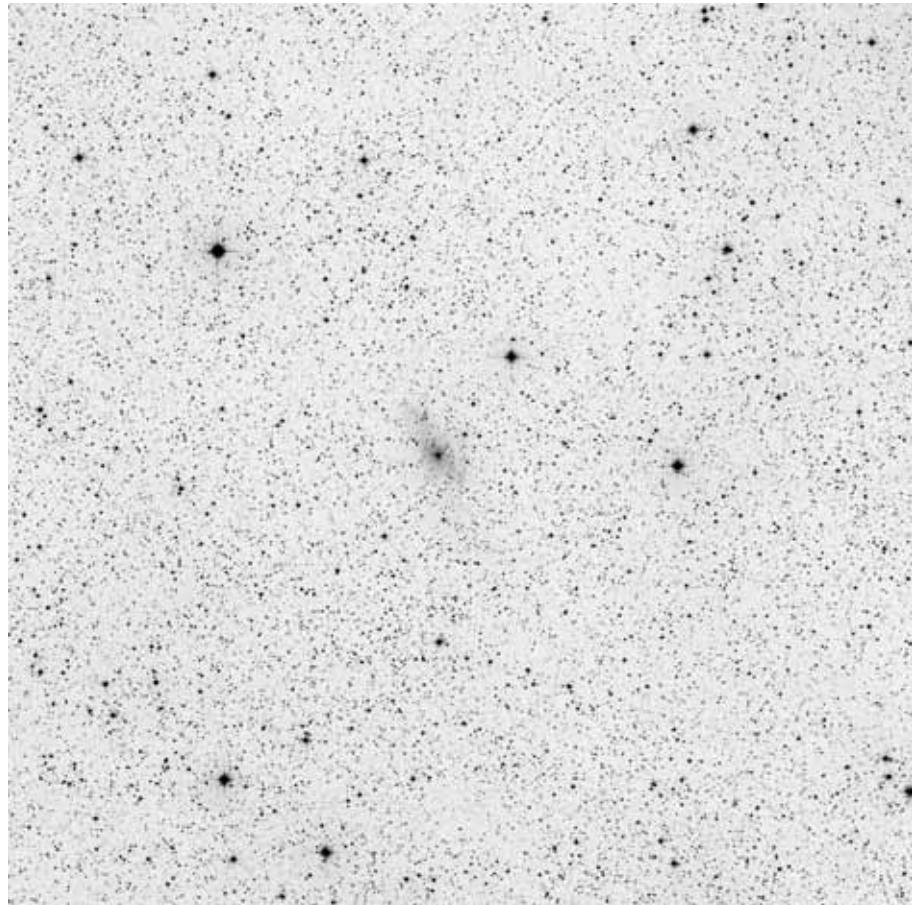
Distance: 3200 pc, Source: 2003A&A...397..133R

Sh 2-192, Sh 2-193 and Sh 2-194 are all near the W4 and W5 complexes.

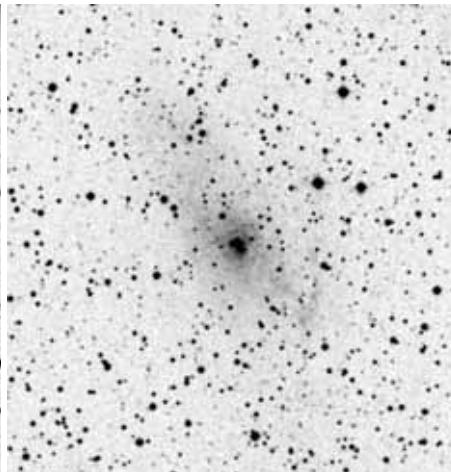
Observing notes:



**Sh 2 - 195/197
in Cassiopeia**



POSS blue



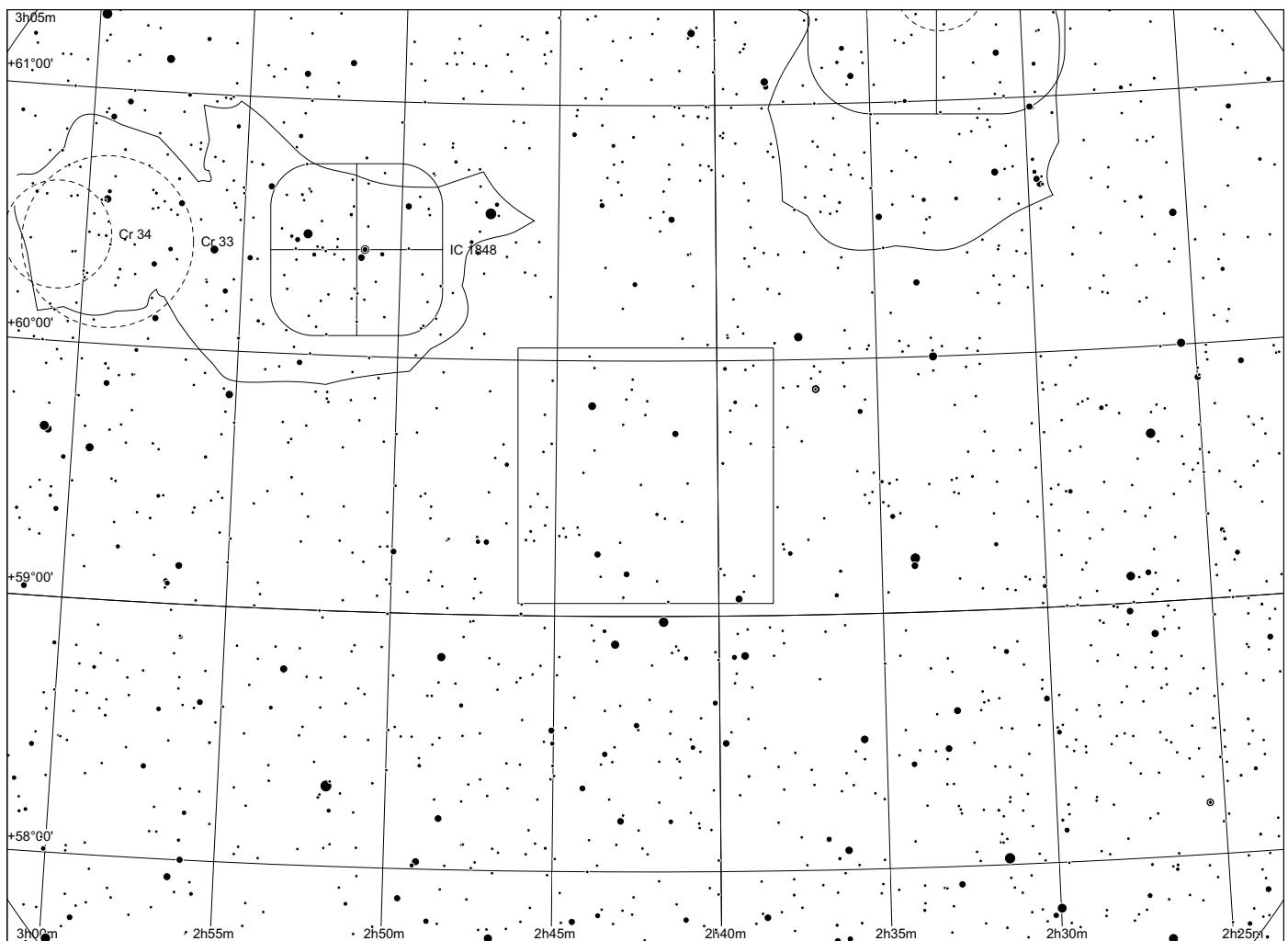
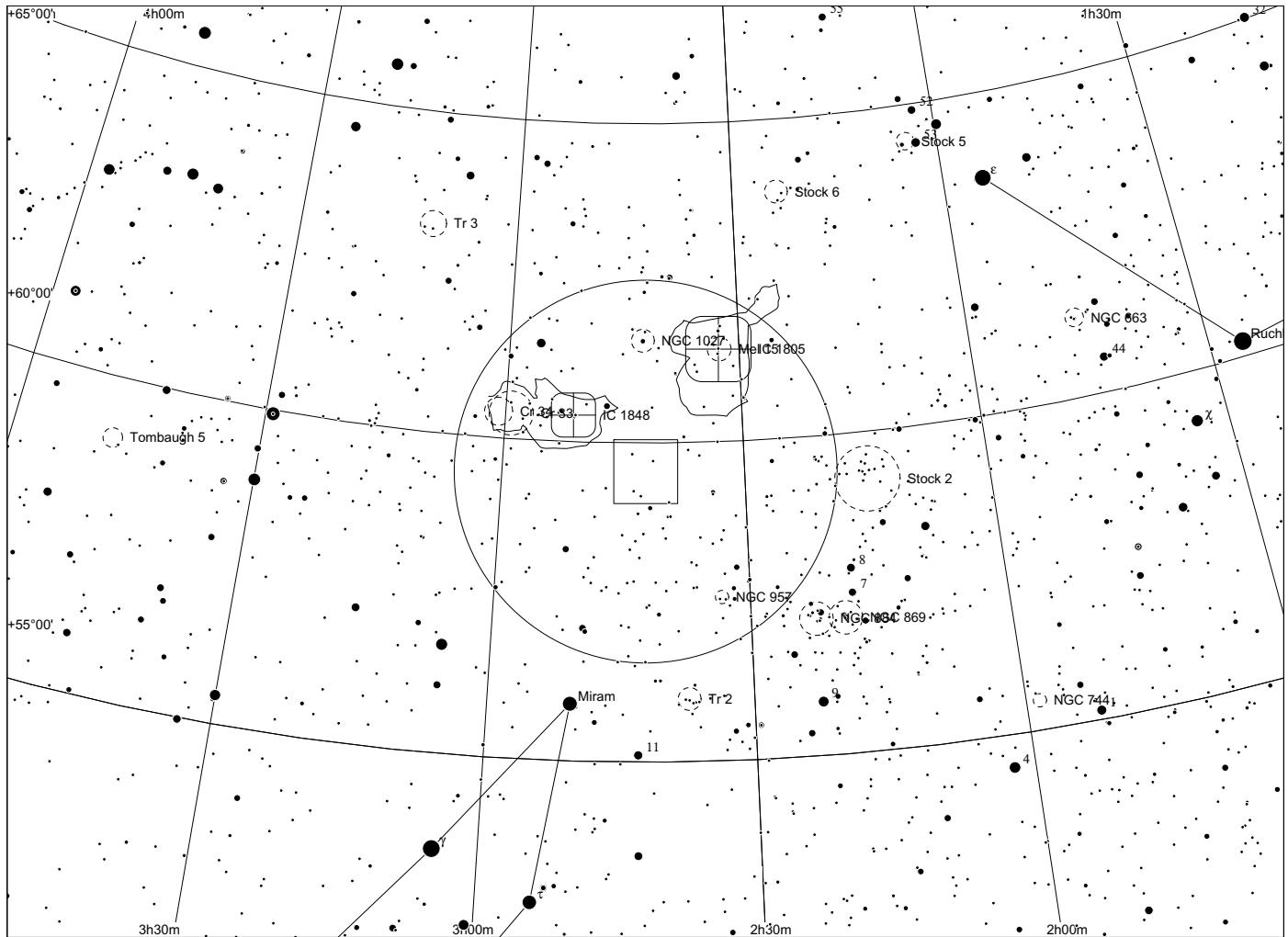
POSS red

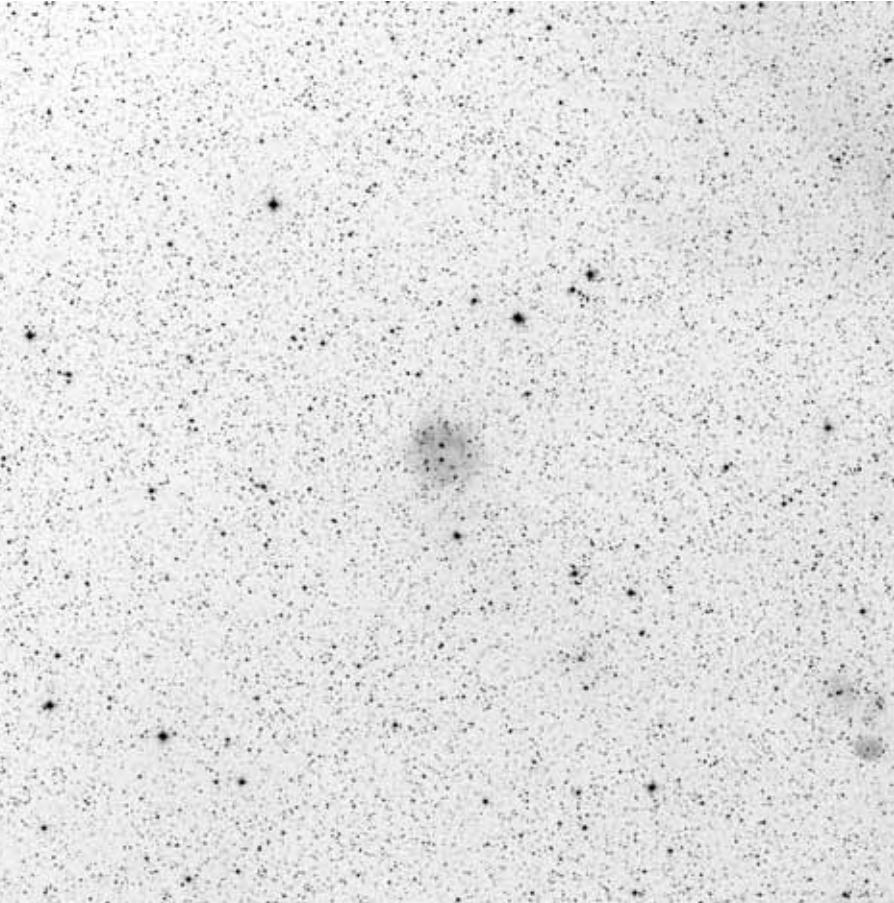


	other name	RA	dec	dia. '	F	S	B
Sh 2-195		02 40 05.1	+59 38 56	3	3	1	1
Sh 2-197	Maffei II	02 41 54.8	+59 38 46	5	3	2	1

This is Maffei II

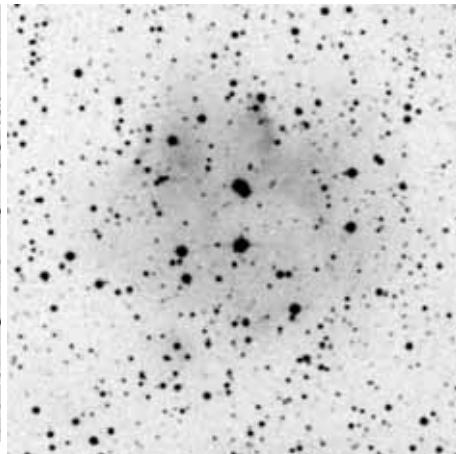
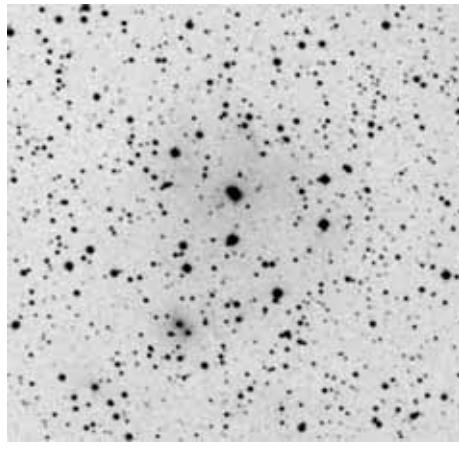
Observing notes:





Sh 2 - 196
in Cassiopeia

60x60, red



POSS blue

POSS red

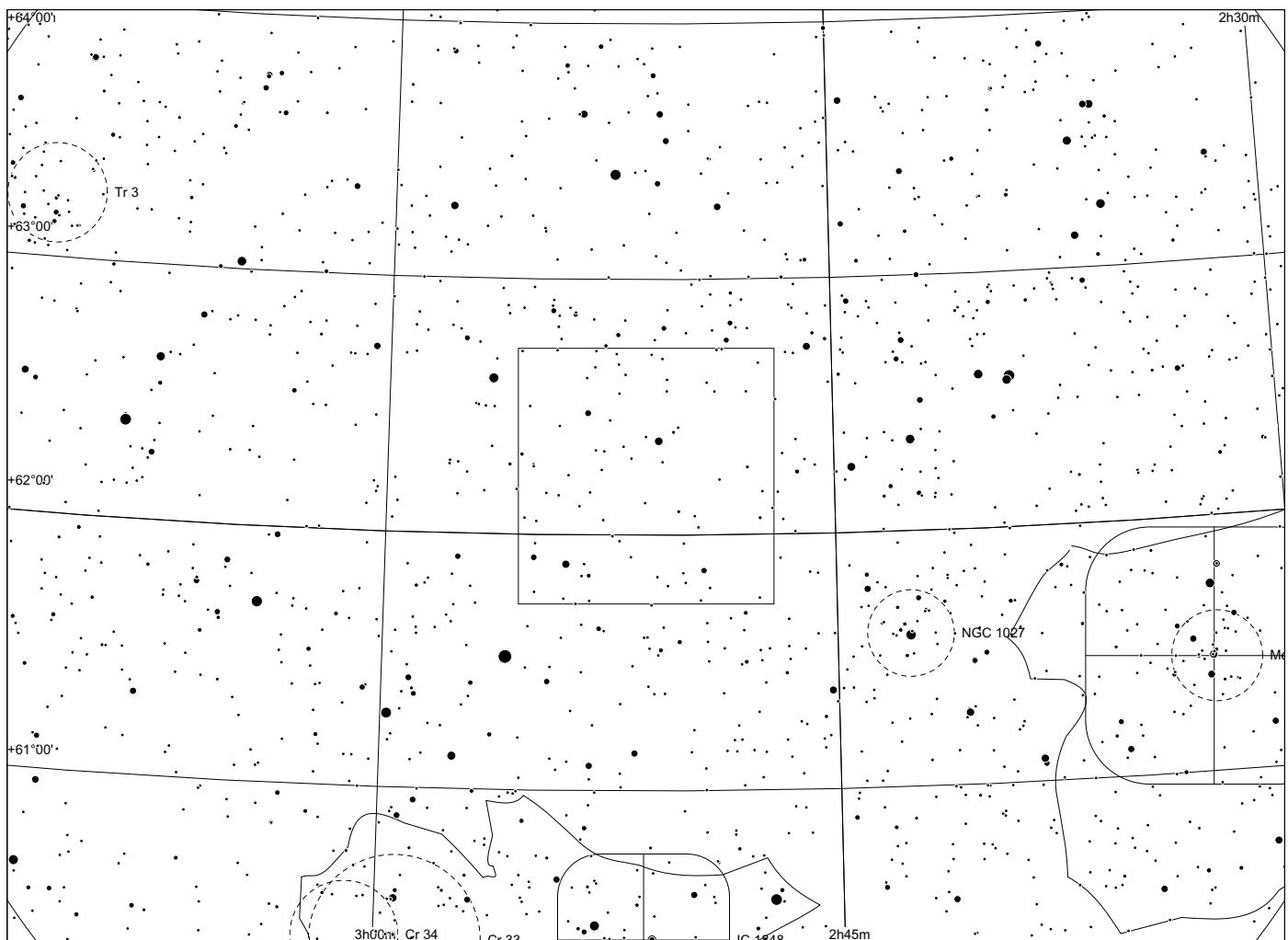
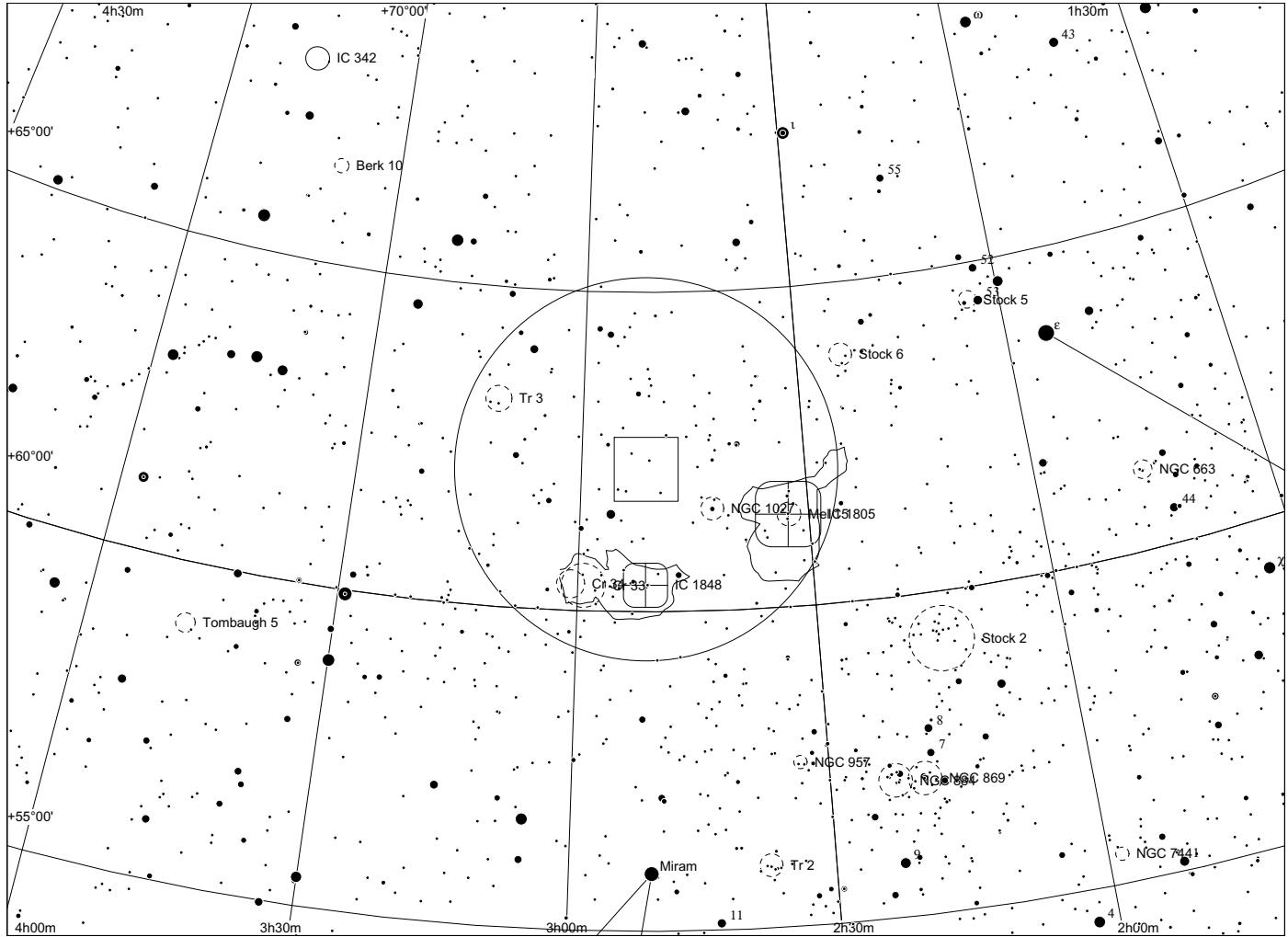
composite

	other name	RA	dec	dia. '	F	S	B
Sh 2-196		02 51 18.8	+62 13 53	4	1	1	2

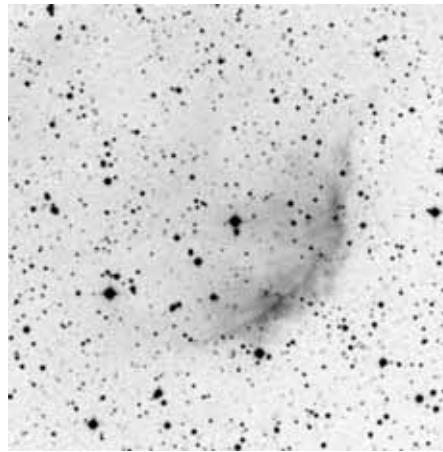
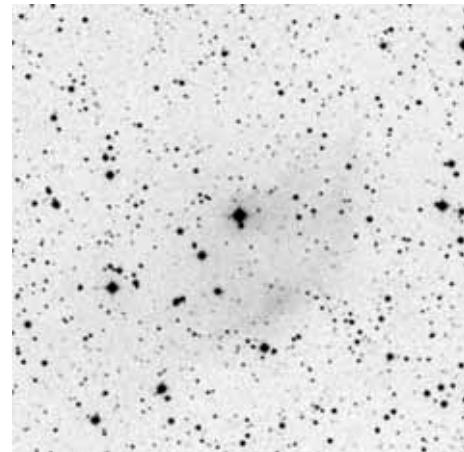
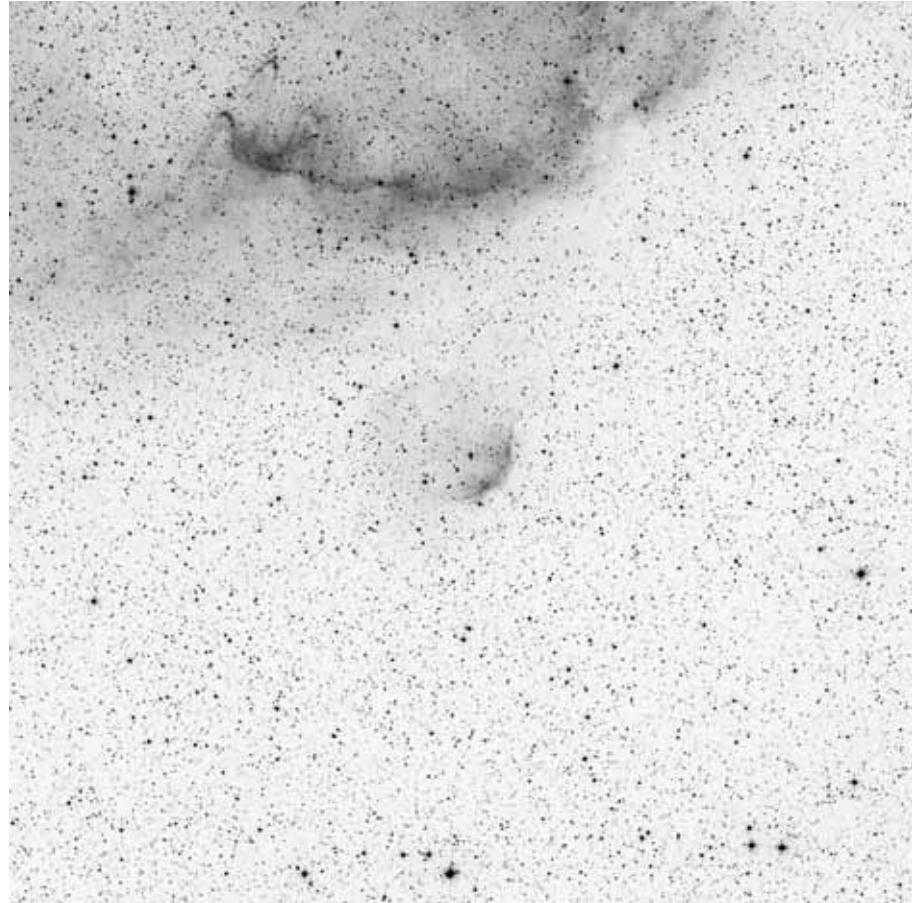
Distance: 3200 pc, Size: 3.7 pc, Source: 2003A&A...397..133R

This HII region lies between W4 and W5.

Observing notes:



Sh 2 - 198
in Cassiopeia

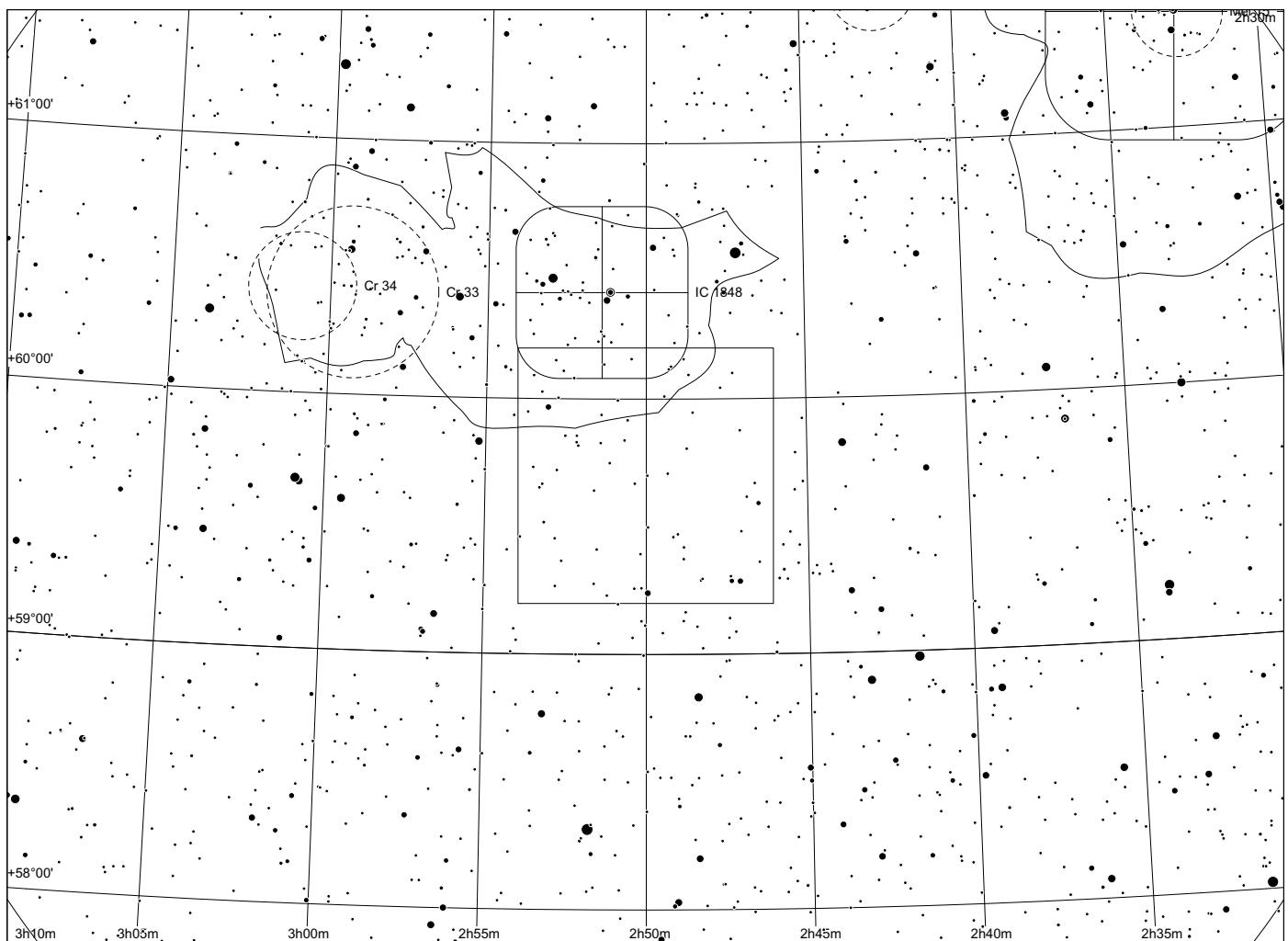
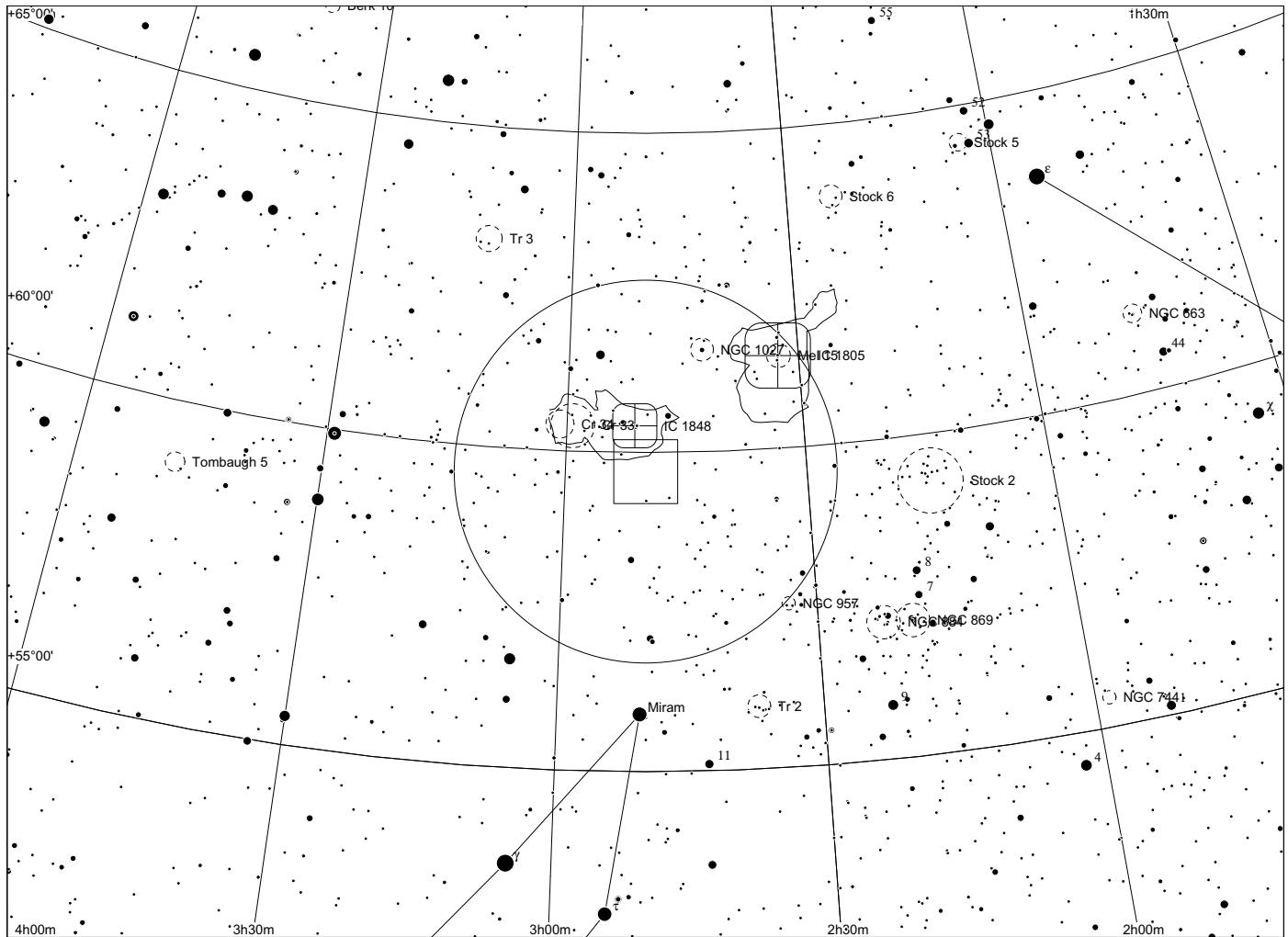


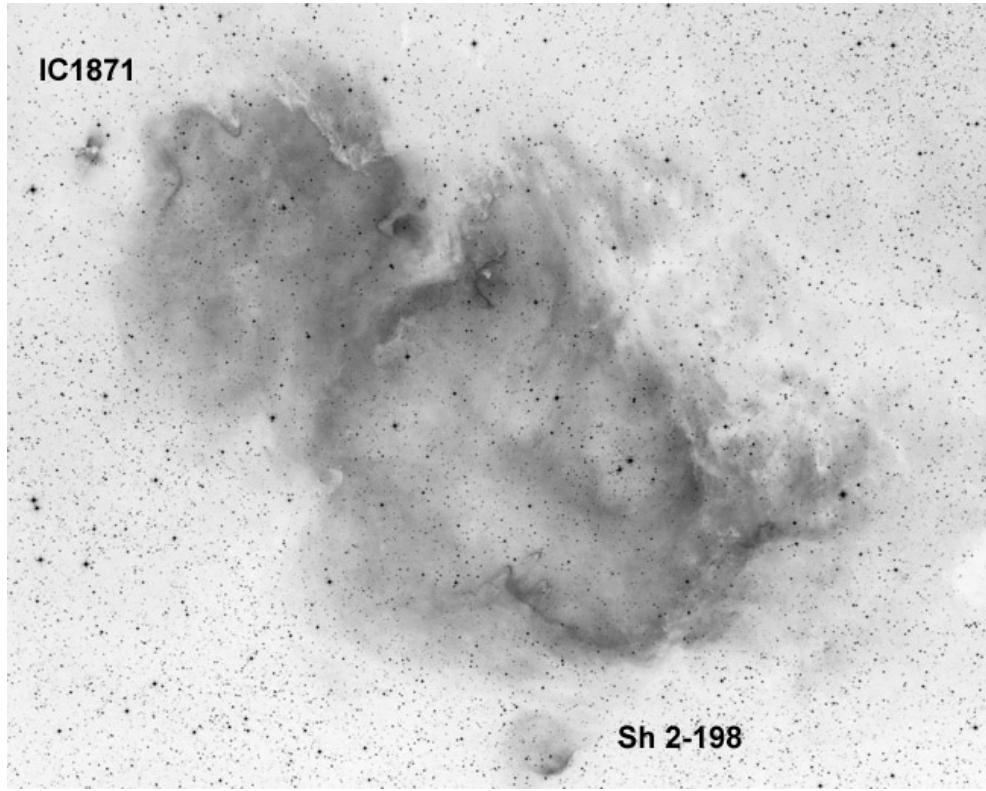
	other name	RA	dec	dia. '	F	S	B
Sh 2-198		02 50 01.0	+59 42 01	9	2	2	2

Distance: 2900 pc, Size: 7.6 pc, Source: 1982ApJS...49..183B

This region is located towards the south of the W5 star formation area / radio source.

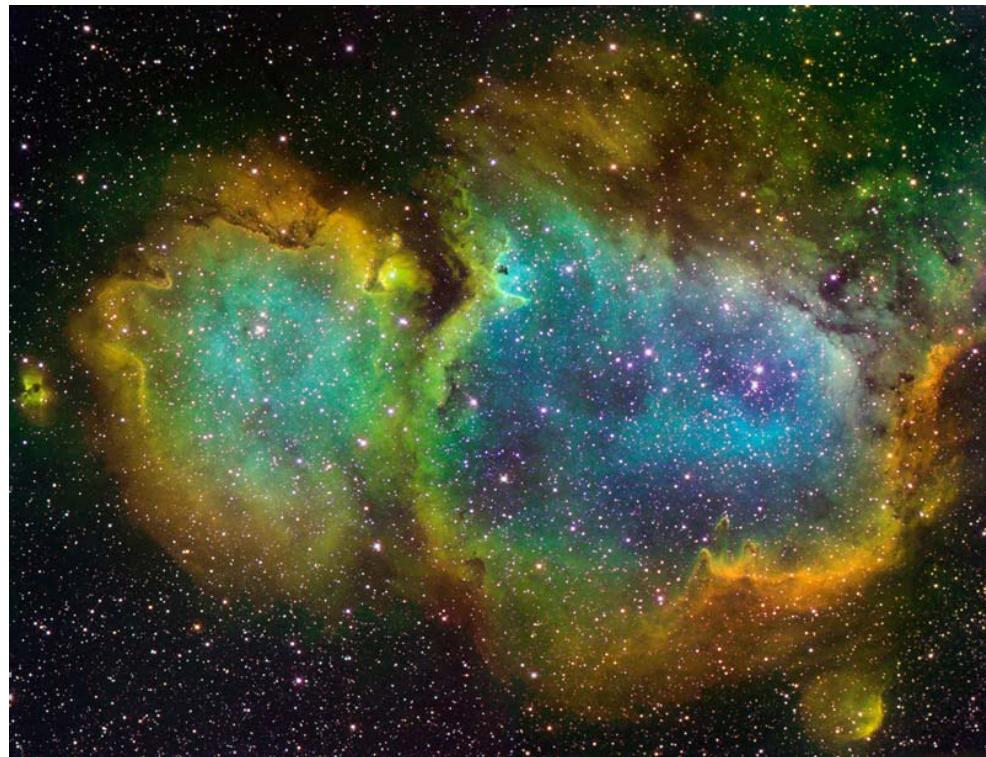
Observing notes:





Sh 2 - 199
in
Cassiopeia

60x60, H alpha



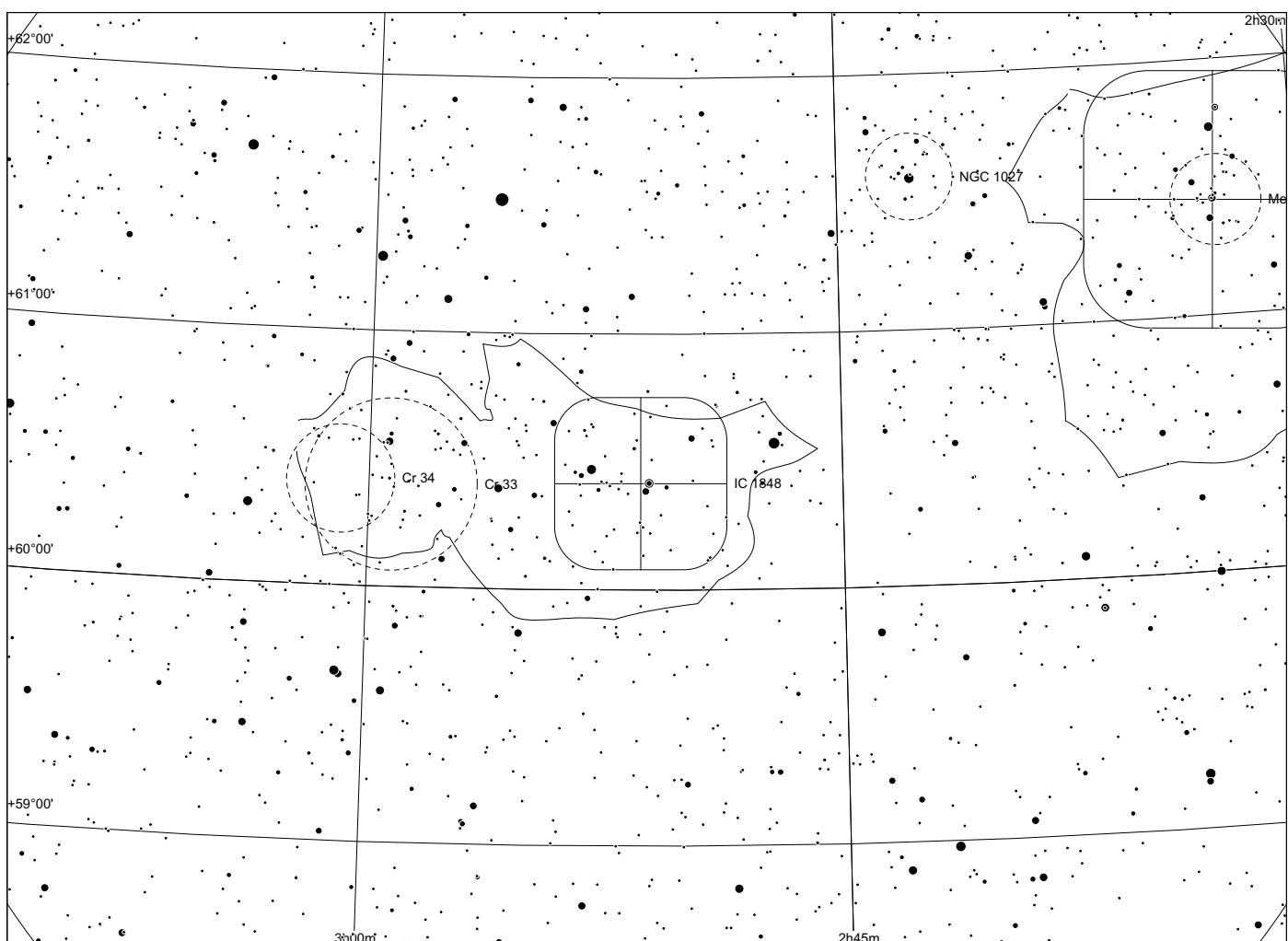
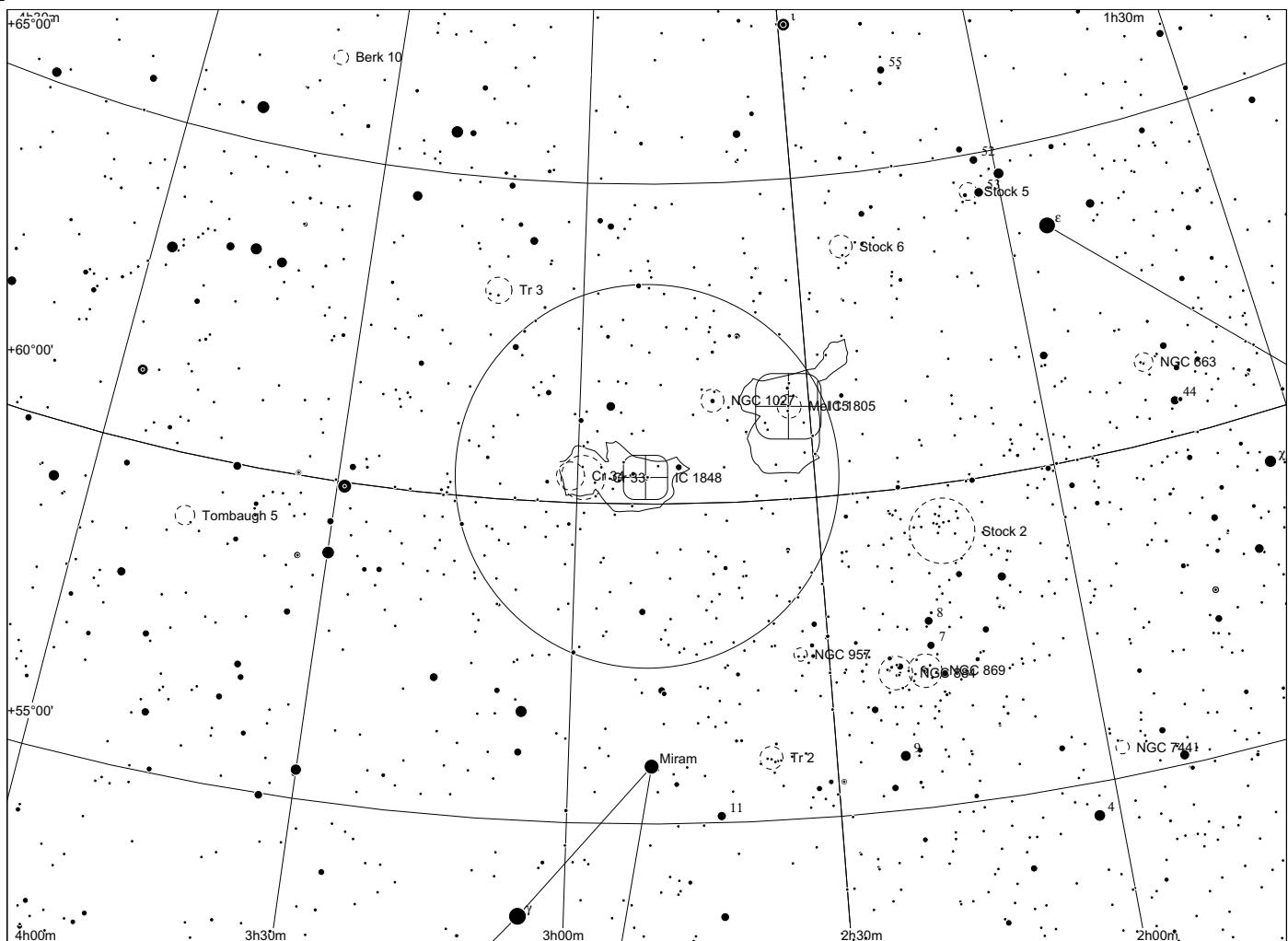
narrowband
Dean Salman

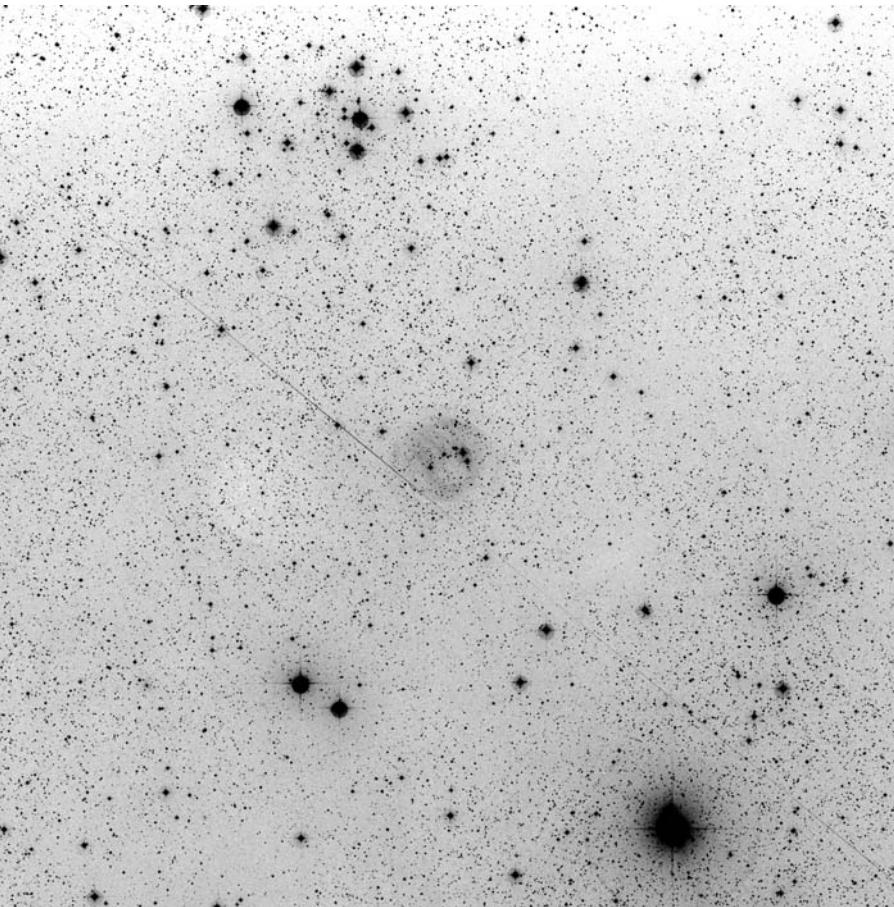
	other name	RA	dec	dia.	F	S	B
Sh 2-199	IC 1848	02 54 32.9	+60 24 34	120	3	2	3

Distance: 2100 pc, Size: 73.3 pc, Source: 1982ApJS...49..183B

This is also called IC 1848, W5 and the Soul nebula and is a major star formation region.

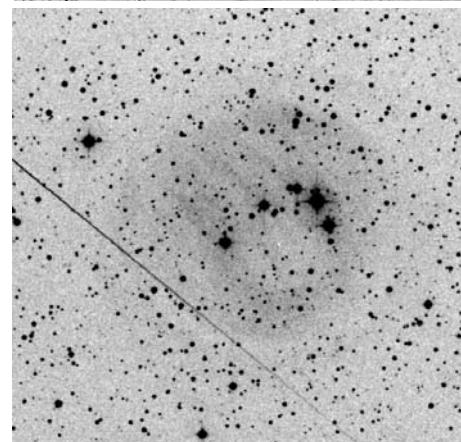
Observing notes:



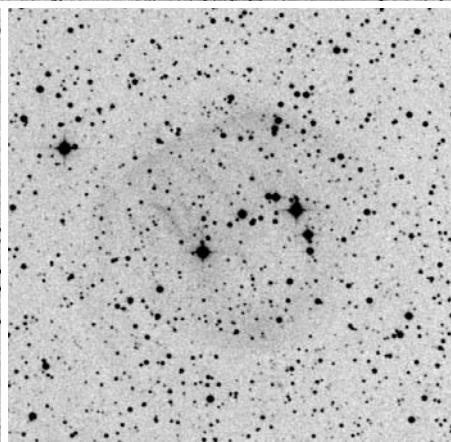


**Sh 2 - 200
in Cassiopeia**

60x60, red



POSS blue



POSS red



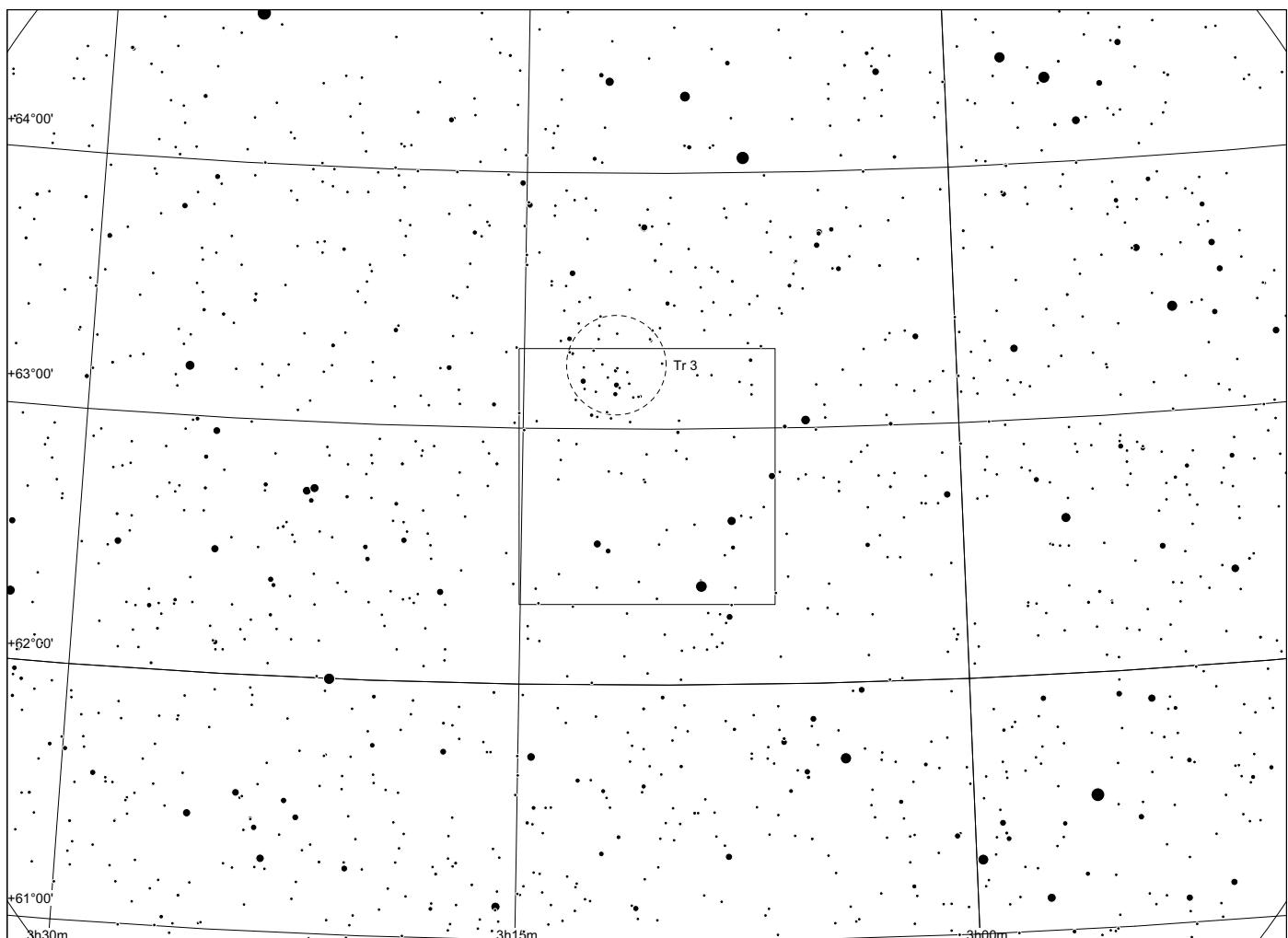
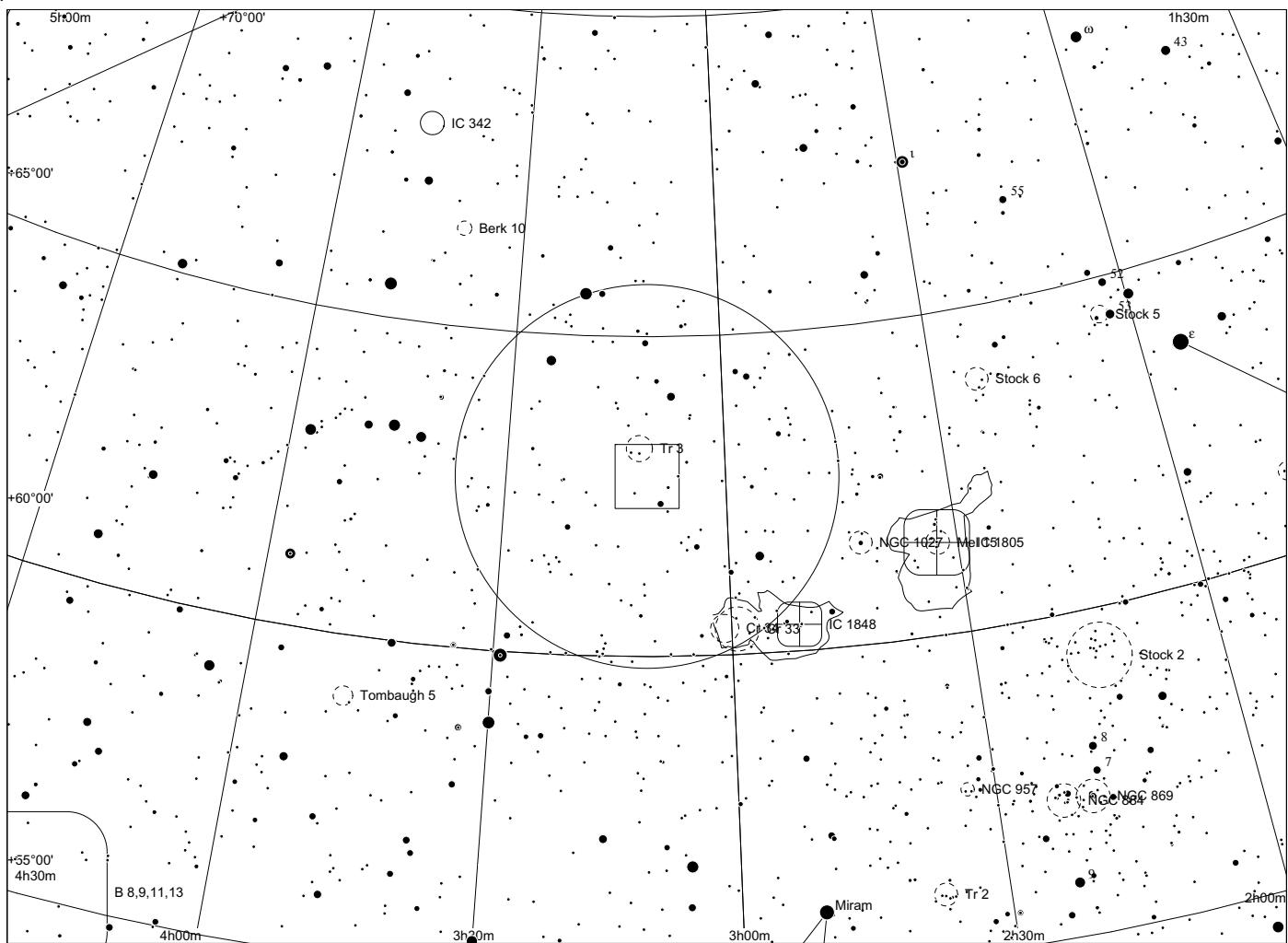
composite

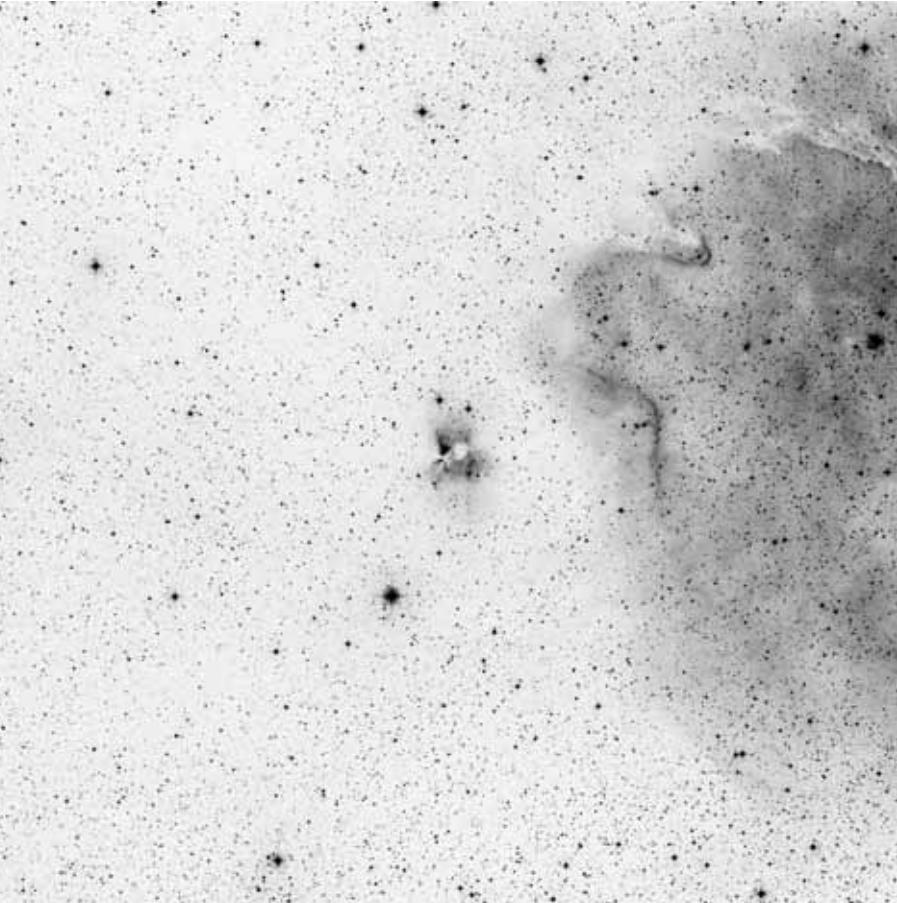
	other name	RA	dec	dia. '	F	S	B
Sh 2-200	PN HDW 2	03 10 44.7	+62 48 55	6	2	2	1

Distance: 1100 pc, Size: 1.9 pc, Source: 2003A&A...397..133R

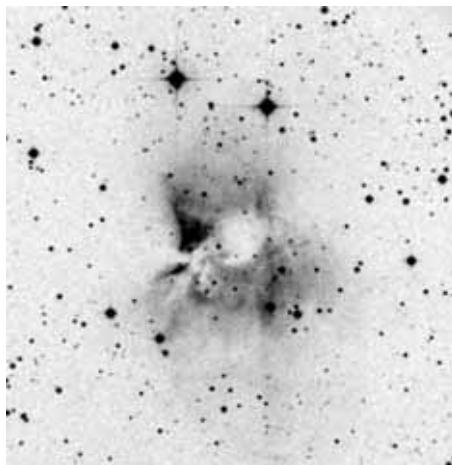
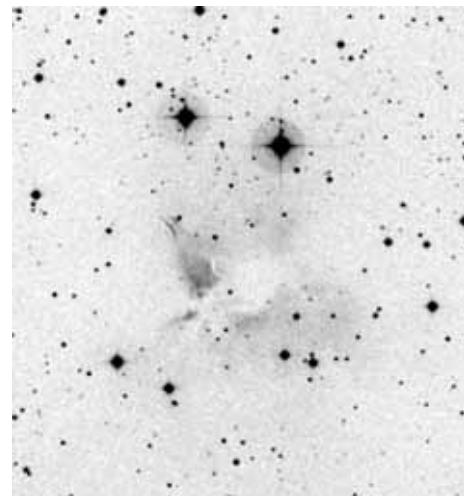
This is the planetary nebula HDW 2.

Observing notes:





Sh 2 - 201
in Cassiopeia



POSS blue

POSS red

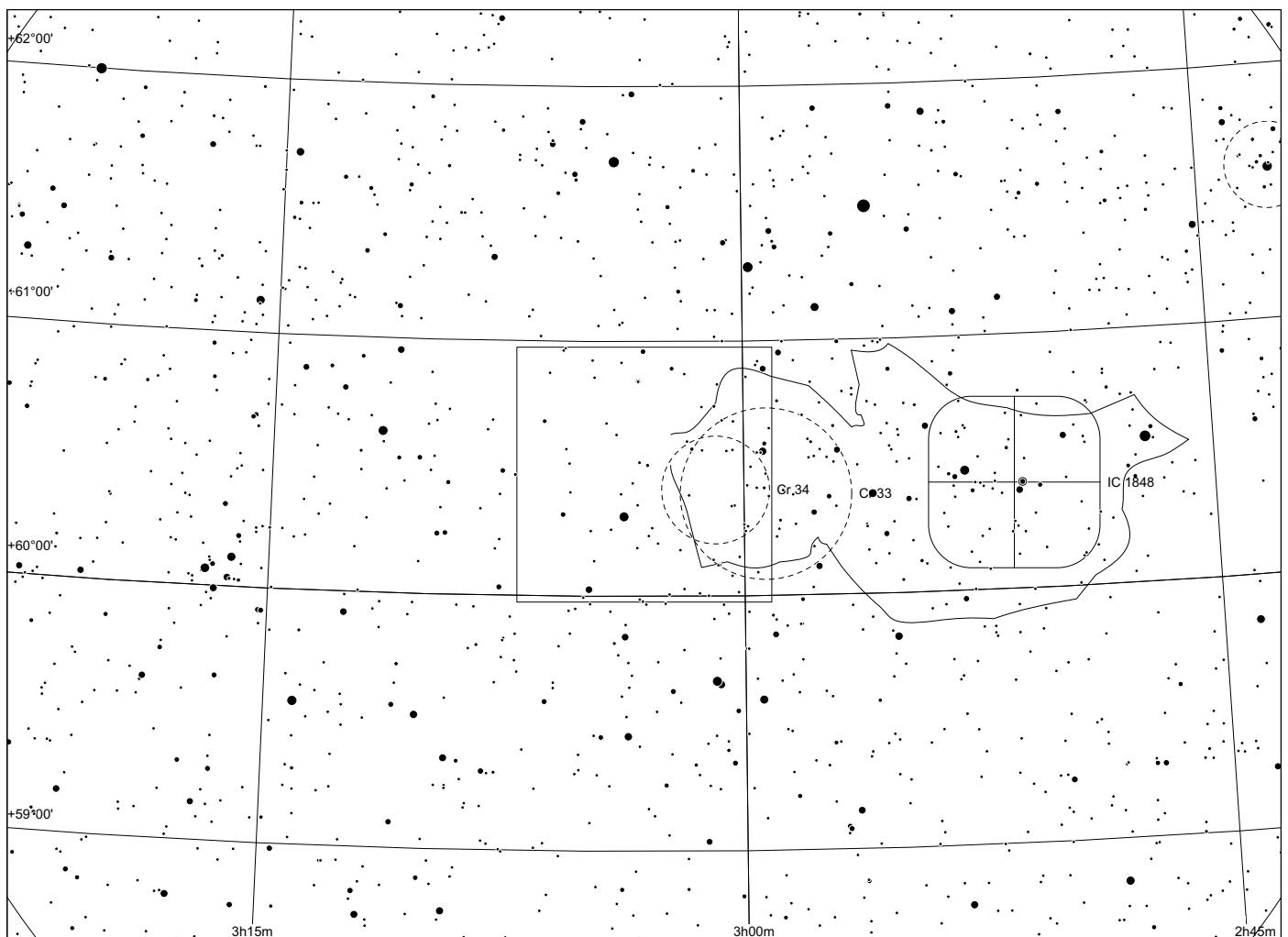
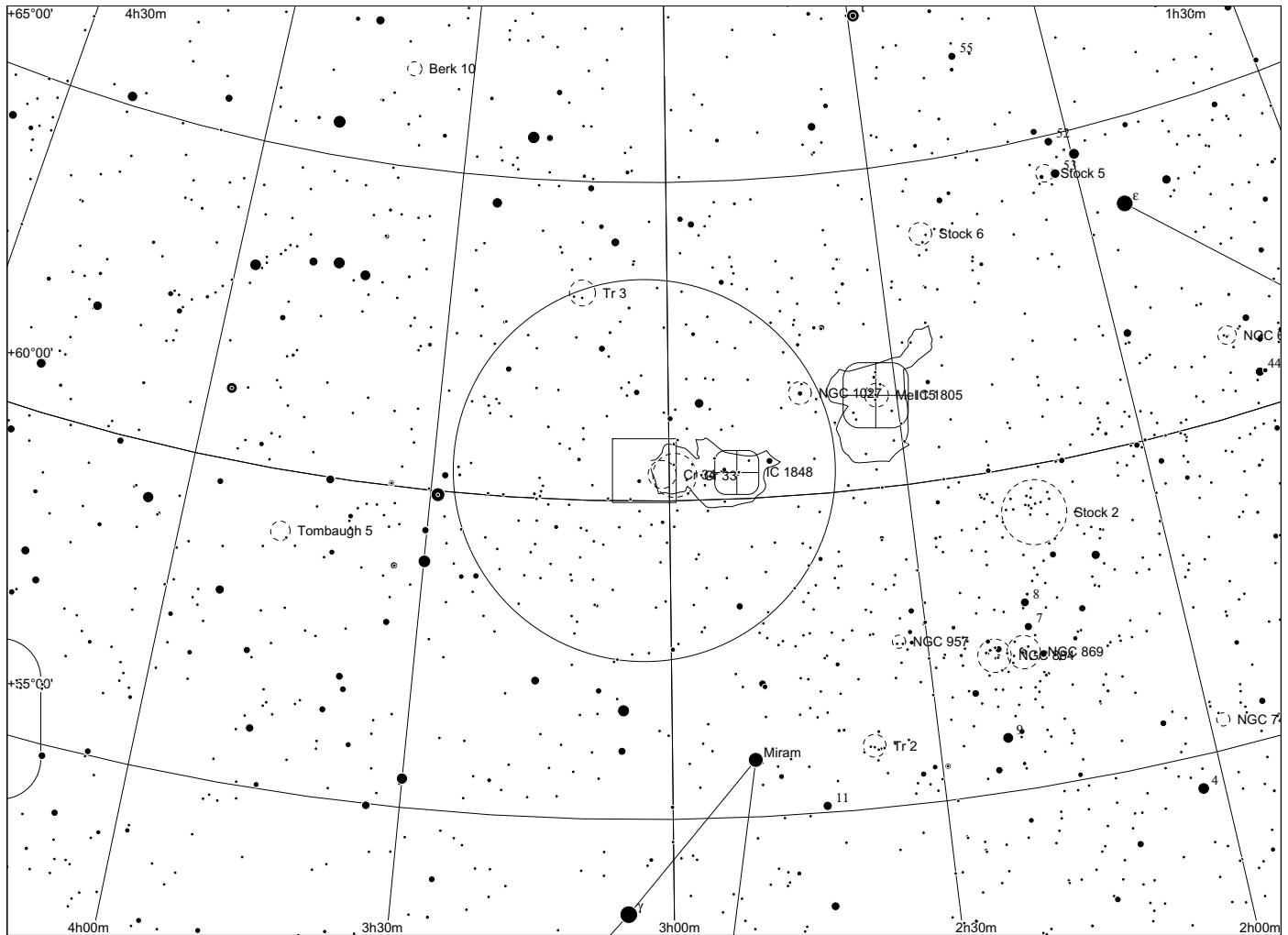
composite

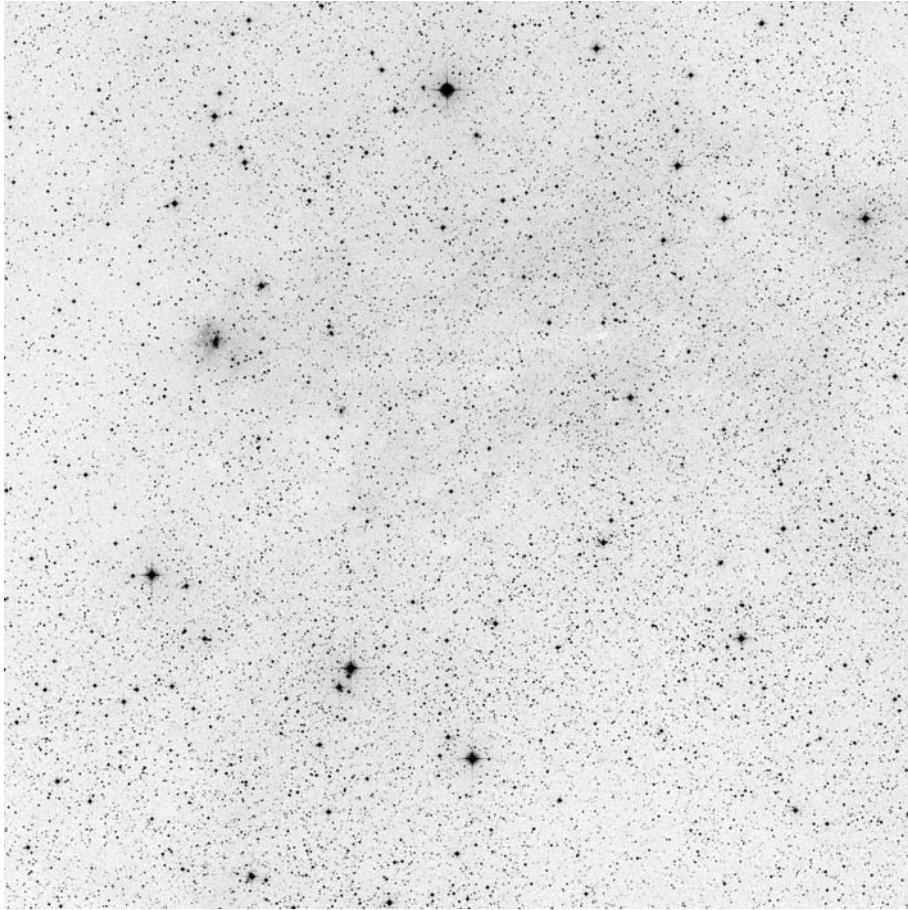
	other name	RA	dec	dia. '	F	S	B
Sh 2-201		03 03 10.3	+60 28 42	5	3	2	3

Distance: 3059 pc, Size: 3.6 pc, Source: 2003A&A...397..213P

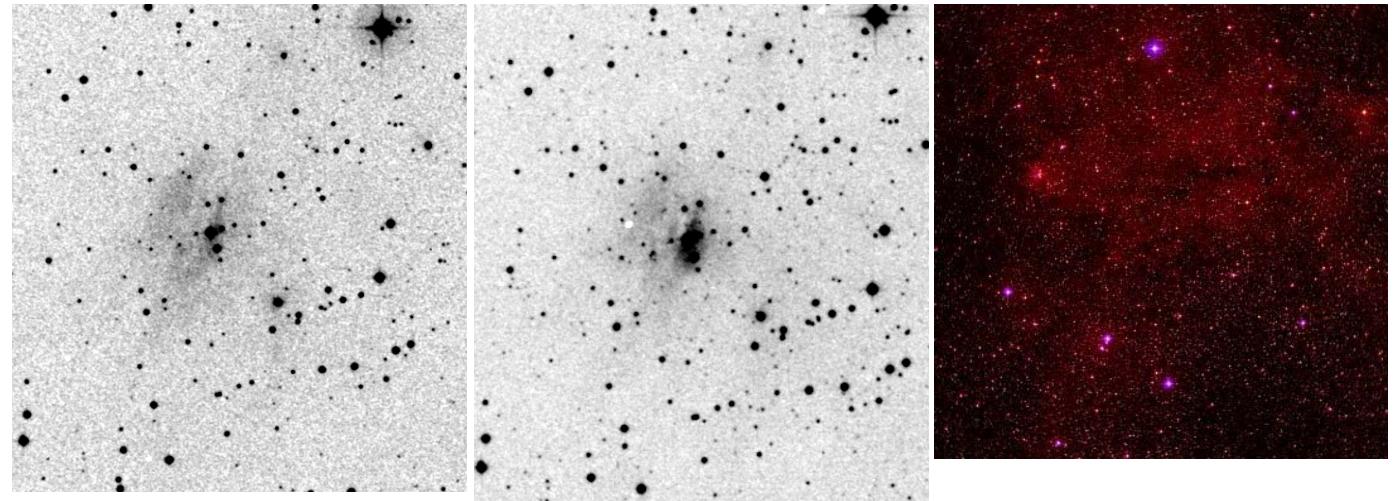
A small HII region adjacent to the Soul nebula, Sh 2-199. The distance to this object is about 2300 pc, which puts it fairly close to Sh 2-199.

Observing notes:





Sh 2 - 203
in Camelopardalis



POSS blue

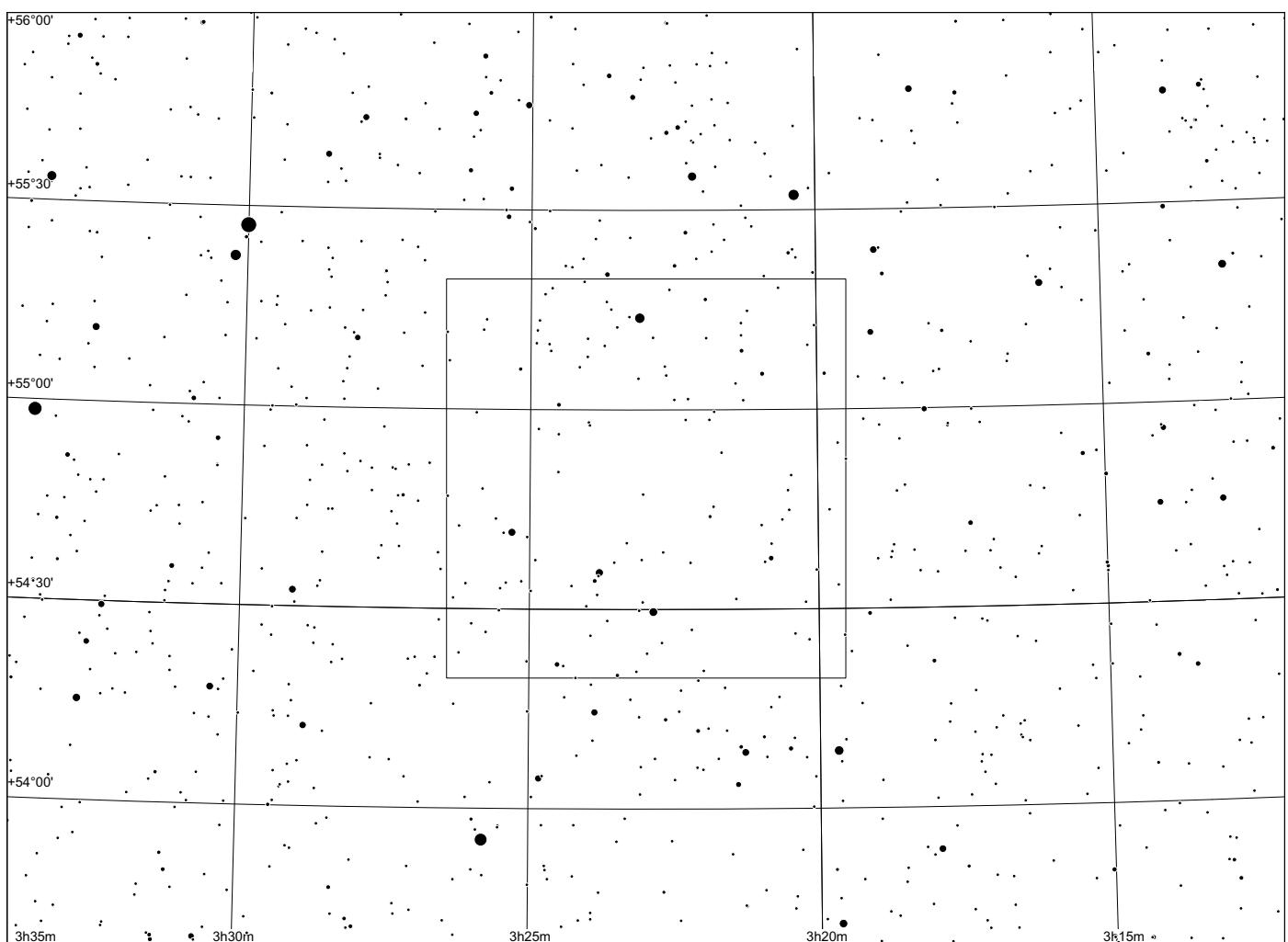
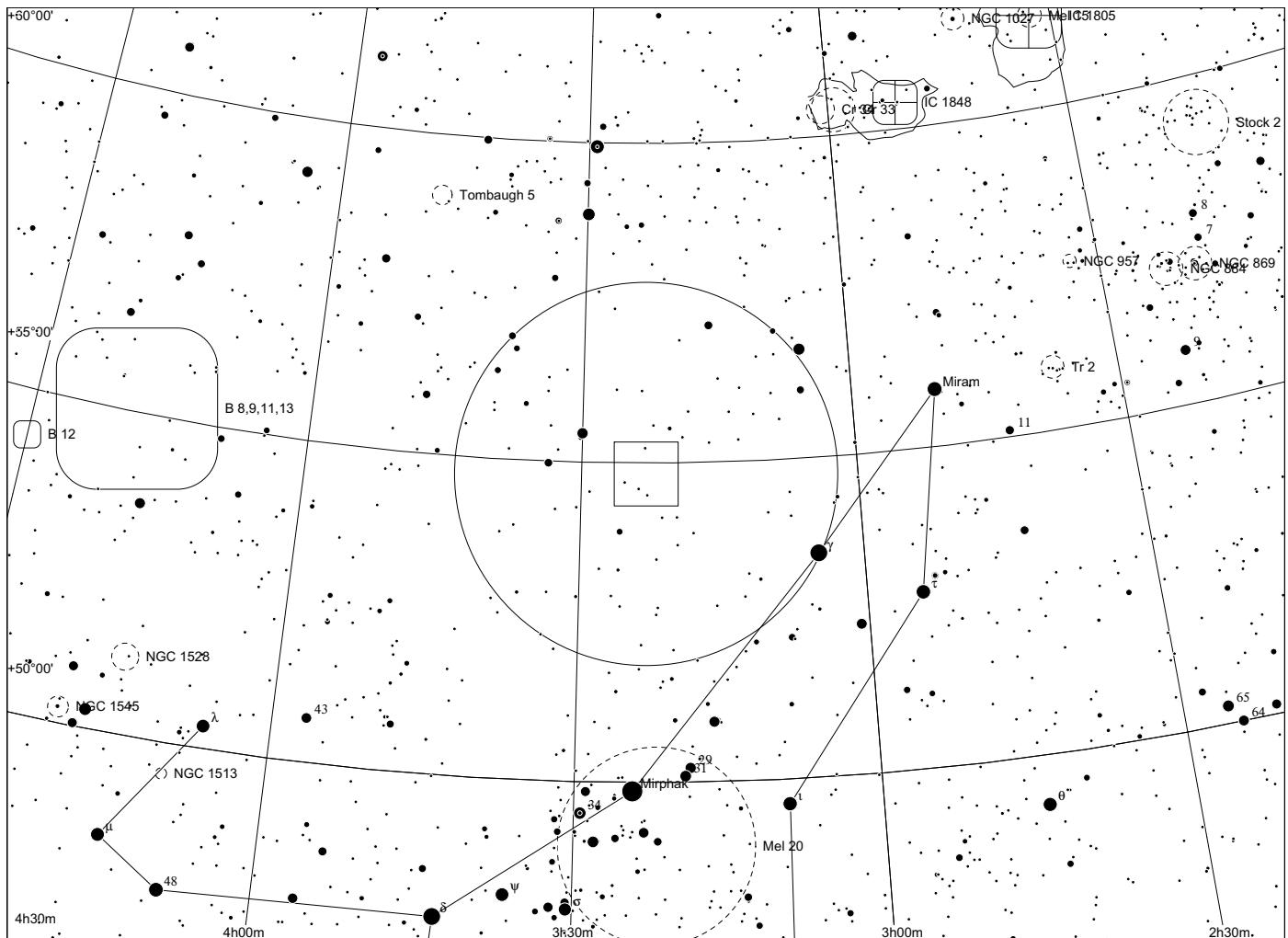
POSS red

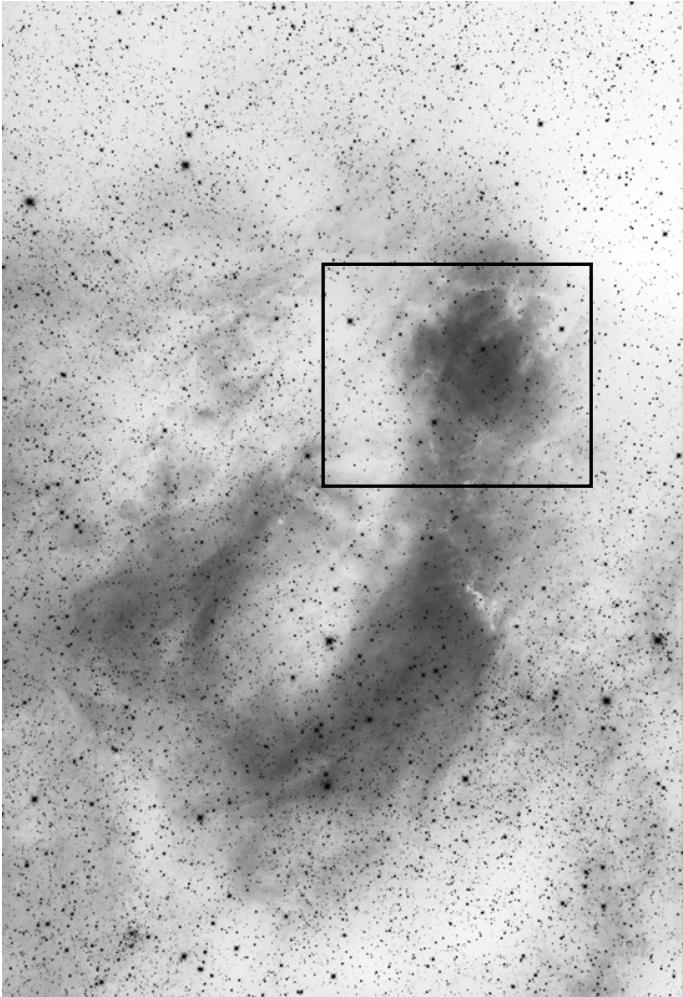
composite

	other name	RA	dec	dia. '	F	S	B
Sh 2-203		03 22 00.3	+54 52 40	45	1	2	1

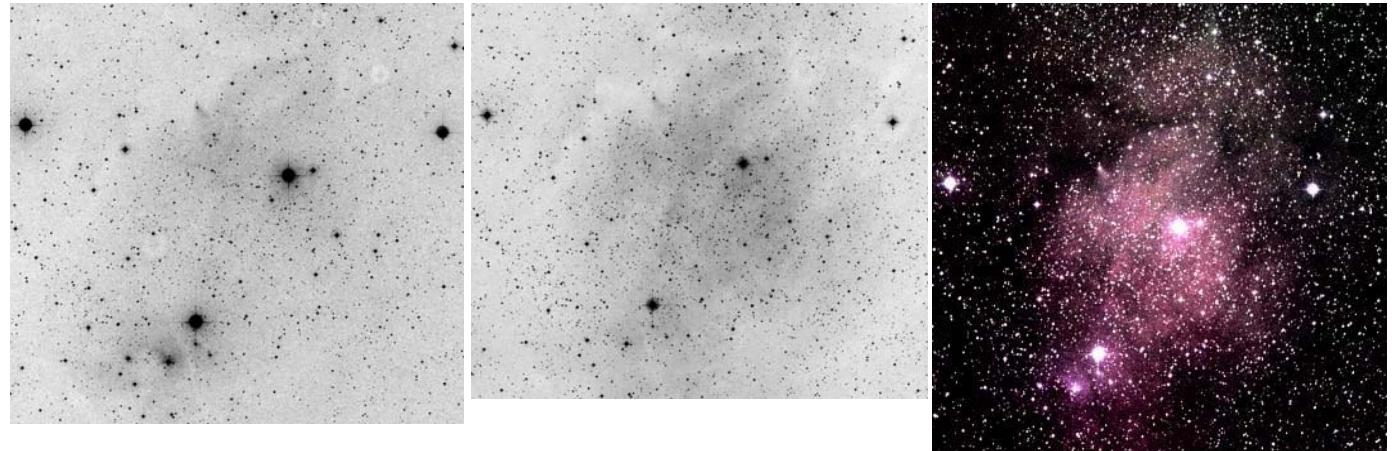
Distance: 3500 pc, Size: 45.8 pc, Source: 2003A&A...397..133R

Observing notes:





Sh 2 - 205
in Camelopardalis

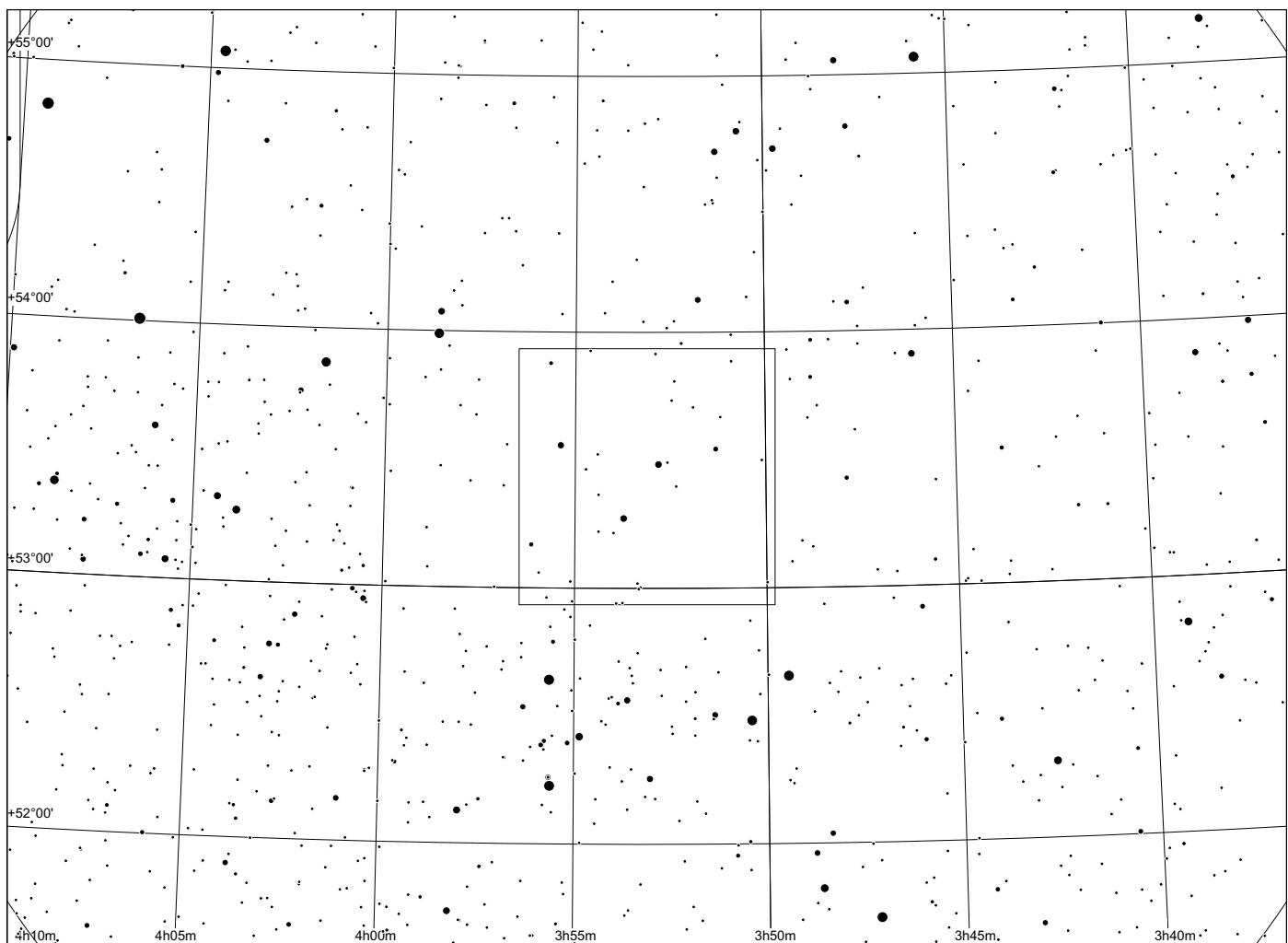
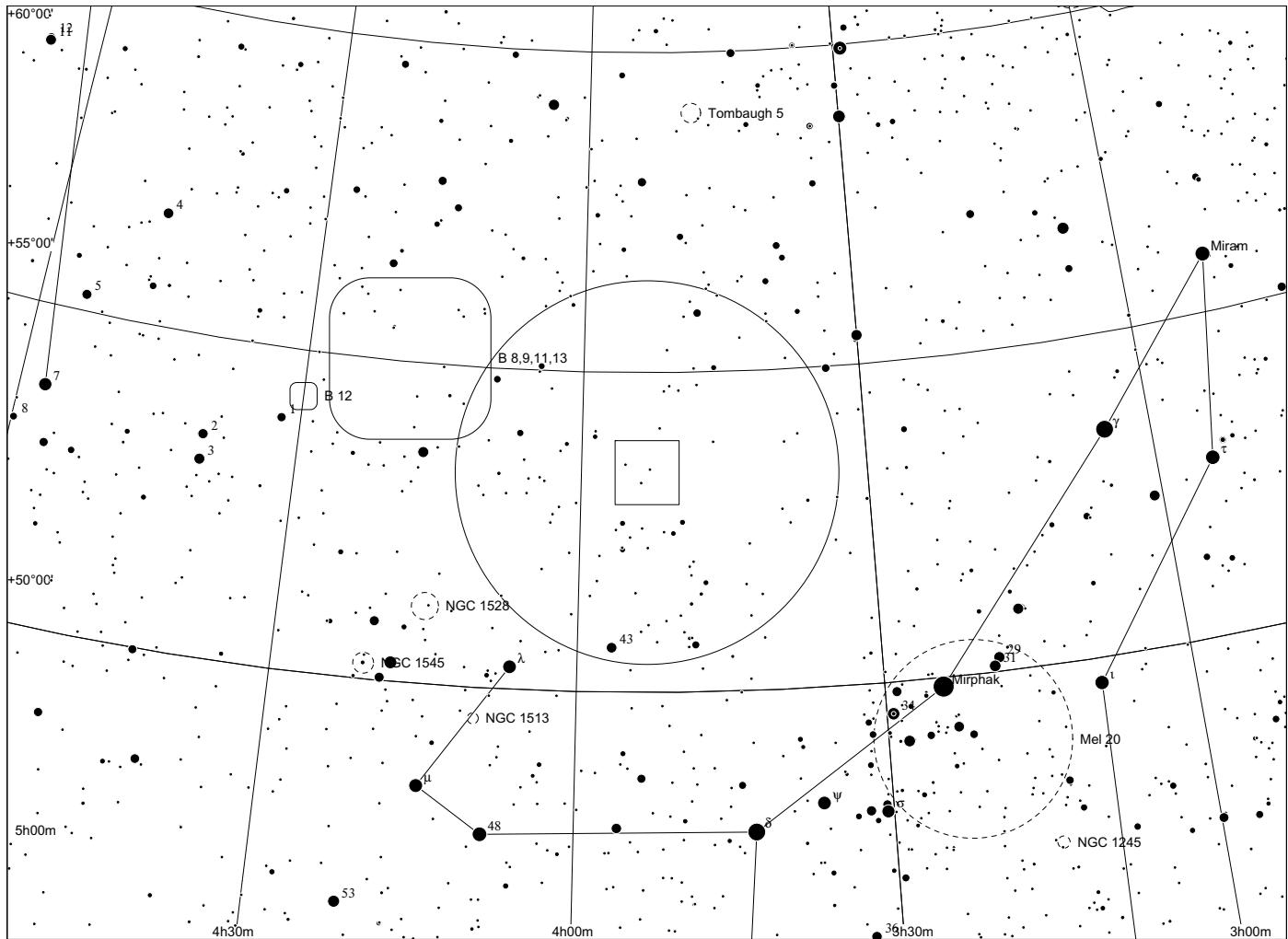


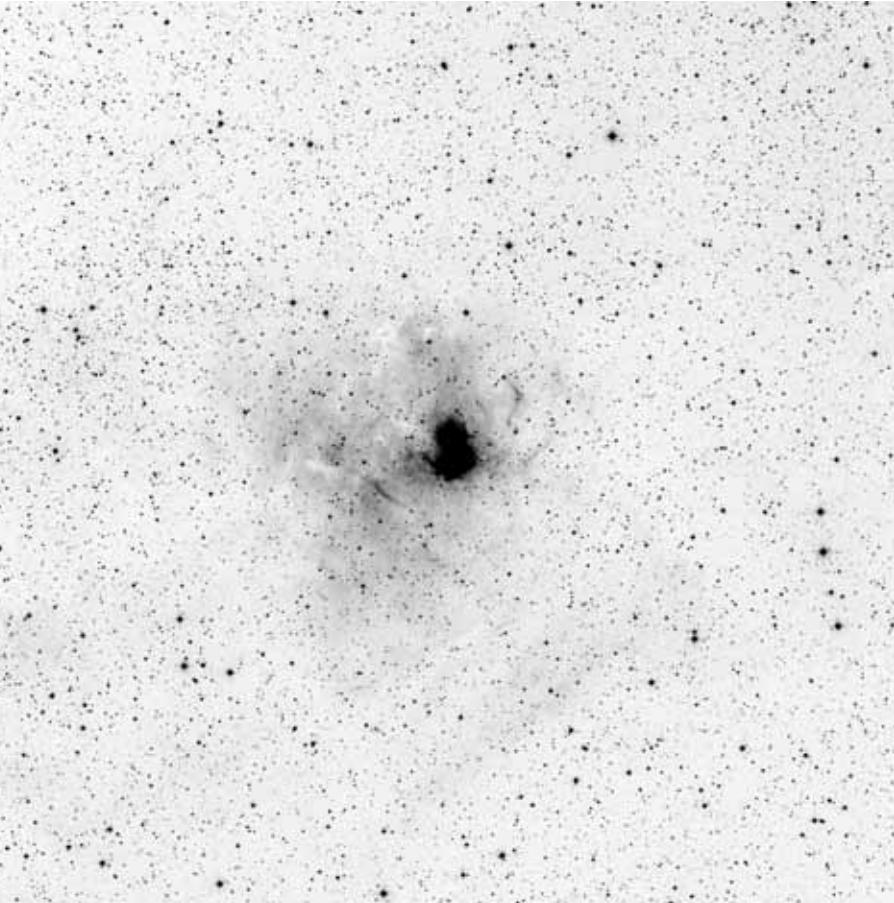
	other name	RA	dec	dia. '	F	S	B
Sh 2-205		03 56 07.7	+53 11 40	120	3	2	2

Distance: 900 pc, Size: 31.4 pc, Source: 1982ApJS...49..183B

The exciting star for this region is believed to be the O8 star HD 24451. Like Sh 2-202, this nebula lies at the edge of the Camelopardalis OB1 association.

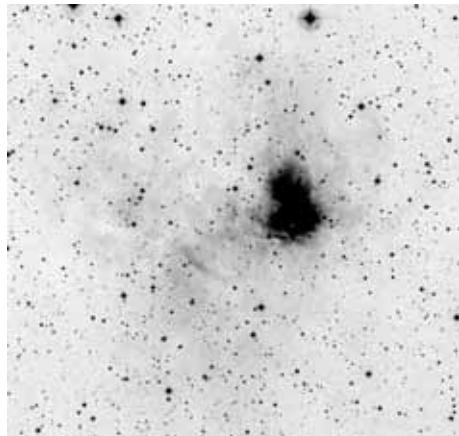
Observing notes:



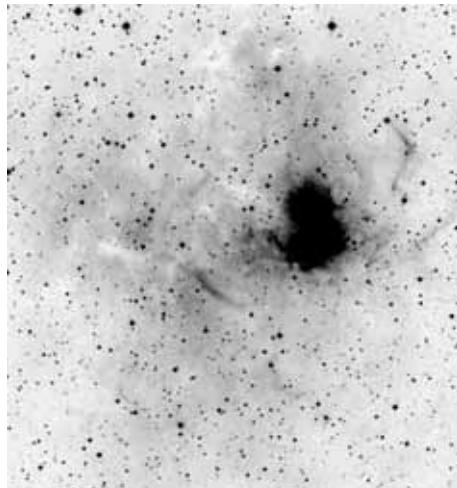


**Sh 2 - 206
in Perseus**

60x60, red



POSS blue



POSS red

composite

	other name	RA	dec	dia. '	F	S	B
Sh 2-206	NGC1491	04 03 13.1	+51 19 46	50	3	2	3

Distance: 3700 pc, Size: 4.4 pc, Source: 1976A&A....48...63D

NGC 1491 is an older, evolved HII region ionised by the O5 star BD +50 886.

Observing notes:

